

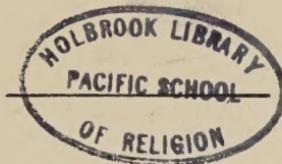
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CHRISTIAN THOUGHT.

LECTURES AND PAPERS ON

PHILOSOPHY,
CHRISTIAN EVIDENCE,
BIBLICAL ELUCIDATION.

FOURTH SERIES.



EDITED BY
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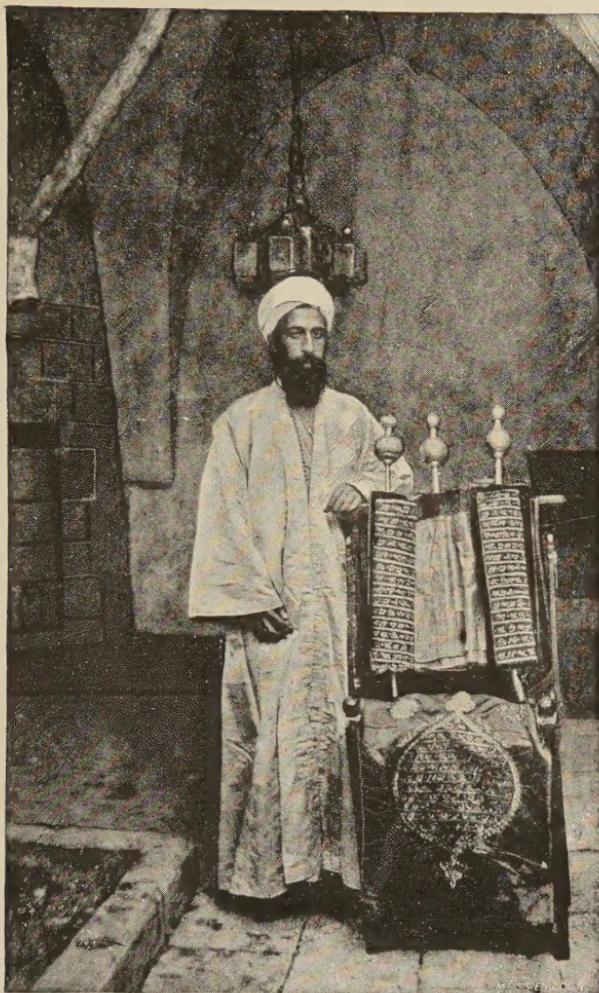


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AUTOGRAPH OF DR. M. MISHAKA.

SEE PAGE 376.

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AUTOGRAPH OF HIGH PRIEST JACOB.

Christian Thought.

CHRISTIAN THOUGHT.

A DEFENCE OF THE SUPERSTITIONS OF SCIENCE.

[A Lecture delivered before the American Institute of Christian Philosophy, August 2d, 1885.]*

By CHARLES F. DEEMS, D.D., LL.D.

President of the Institute.

IN the first decade of this century a French peasant girl was at her outdoor work of tending sheep, when an iron chain suddenly fell at the feet of the young shepherdess, as if it had been dropped out of the heavens. Apparently it could have come from nowhere else, since, in that open field, there was nothing between her head and the cloudless sky. She doubtless regarded it with superstitious awe. Very many centuries before her time, an image was reported to have so dropped down from heaven and become the object of superstitious regard, not simply to unlettered peasants, but to poets, philosophers and kings. Why might not the great God, who, she had been taught to believe, had made revelations through women, have set some spirit free and having materialized the chain that bound it, flung it at the feet of this virgin, to be the symbol of the emancipation of intellect and spirit, and the perpetual stimulus to human thirst for freedom? Thousands of worshippers might have been drawn to a shrine constructed for this chain, and a service instituted such as had made the Hellenic temples of Dodona and Olympia famous.

That such a state of affairs did not come to pass is due to the fact that it was soon discovered that a young man, then not

* This argument was substantially delivered before the Vanderbilt University, June 15th, 1886.

much known even in his own country, but now known to the whole world of science, was making experiments in aerostation, and that the chain had fallen from Gay Lussac's balloon as he crossed the country. When the maiden recovered from her astonishment and looked up to see if this strange thing had left trace of its descent in the air, the balloon, which was nearly 20,000 feet above the earth's surface, failed to arrest her sight, or had passed out of the field of her vision.

Just as she knew the facts, before knowledge of the balloon reached her, what was that peasant girl to conclude? The chain had fallen from a great height, as its thud on the ground indicated. There was no tree, no tower, no mountain near. It came sheer from the sky to the earth, so far as she could at all discover. If the French girl and her neighbors and the whole country had believed that, we now know that it would have been a superstition, because it would have been a belief in that which was not capable of being demonstrated, if true, and not capable of demonstration as false, if false. If the knowledge of the balloon be excluded, she could not have demonstrated to herself, and no man could have demonstrated to another that the chain fell down from the regions beyond our terrestrial atmosphere, and *yet what else was there to believe in the premises?*

This comparatively recent fact indicates the genesis of many a superstition, ancient and modern. The human race is never without superstition. Religion does not destroy it. Science seems to foster it. In all minds, however trained or however uncultivated, it maintains its ineradicable growth. Is not the nineteenth century after Christ as superstitious, that is, as much given to the belief of things which can not be formally proved or disproved, as was the nineteenth century before Christ? The external development may vary, while the internal germ remains the same. That which is the exhibition of superstition in a man to his fellow is that man's basis of intellectual growth and practical living. Because a proposition can not be shown to the logical understanding to be true, by processes of ratiocination amounting to a demonstration, is not a proof that it is not true. No man can thus prove his own existence to another. Any syllogism he can construct must necessarily as-

sume, in at least one of its premises, the very thing to be proved. But still he may believe it, yes, and must believe it. Some exterior logician may remonstrate with him as being superstitious, in believing the unprovable, but the interior, informal logic of his soul grasps the proposition of his existence as expressing a fact always certain to his consciousness.

And so it comes to pass that superstition is not confined to the domain of religion. Some ages are marked by emphasis of religious superstition, others by that which is practical, others by that which is scientific.

Ours is an age that falls in the last of these categories. The tendency is to cling all the faster to those superstitions which take their shape from science, as we abandon those which take their color from religion. It is a remarkable fact that all the fundamental beliefs among scientific men, beliefs in which they are unanimous, those dogmas which may be considered to be the embodiment of the Catholic doctrine of the Church Scientific, are just as certainly superstitions, that is to say, beliefs in unproved and unprovable propositions, as ever were the religious superstitions of ancient Greece or Rome, or as now are the religious superstitions of the Brahmins of Central India.

In having your attention solicited to these scientific superstitions, you are asked to remember that no attack is made upon them. Their soundness is not even questioned. So far from striving to overthrow them, the present speaker unites with all well-informed persons in giving his sincere adhesion to these forms of faith. His object is to point out the important fact that they lie outside the realm of reason, and inside the domain of imagination or faith, but are nevertheless found to be credible.

Let us look, first of all, into the department of logic, the science of sciences, the creator, preserver and redeemer of sciences. Its great implement is the syllogism, a thorough knowledge of the powers and uses of which, it is believed, enables any man to detect any fallacy in any process of reasoning, deductive or inductive, carried forward either formally or informally.

It seems impossible to overvalue this knowledge. The process rests on the famous *dictum* of Aristotle that whatever can

be affirmed or denied of a class can be affirmed or denied of every member thereof. A simple illustration of a syllogism in the first figure of the first mood is this: All men are mortal; John is a man; therefore, John is mortal. Another, to take an example from the department of science, is this: All conductors are non-electrics; liquids are conductors; therefore, liquids are non-electrics. For ages this has been one of the idols of the study. No Bushman in the wilds of Southern Africa has worshipped his fetich more reverently than schoolmen, through a thousand years, have regarded this process and the great *dictum* on which this process is based. Its foundation, however, is a superstition.

We believe that in all correct deduction there are two premises which are true, from which must be inferred a third, which is also true; but let us notice that of those two that are true one embraces the other, so that the Port Royal logicians called the major premise the *containing*, and the minor the *explicative* premise. The real difficulty in this case lies in the fact that none but an Omniscient Being can be certain that the major or containing premise, if it be a universal affirmative or universal negative, can be true. For instance, if I assert that "all men are mortal," it is a mere assumption. I do not *know* all the men who are living at present. If they are living, they are not dead; if they are not dead they may, or may not be mortal. Myriads of human beings, it would seem, had lived upon the globe before I came. I have known only a few, those few whom I found here. Of those who preceded me I have only the testimony in regard to some few that they were actually seen to die and were actually buried, but there are multitudes who may have been translated, who may have glided off our plane and out of our sphere in some other way than by process of mortality. So, when I affirm that all men are mortal I am simply stating what I do not know, what no other man knows, and what, even it be true, no finite being can demonstrate to be true. To be sure of any universal proposition one must know the universe.

The same remarks are applicable to the scientific illustration. No man knows all conductors of electricity and therefore he cannot have sensible knowledge that all conductors are non-

electrics. If, then, this proposition be true, no man can demonstrate its truth.

Thus, in this very process of reasoning we commence with the assumption of what cannot be known to be true, if true, to prove what we assume to be true in the very beginning of the process of proving its truth. It is not only faith in an assumption, but it is faith in an assumption which cannot possibly be demonstrated, if true.

This escapes us, probably, because we do not ordinarily state our reasoning in a formal way. We say "John is mortal *because* he is a man," and assume that all men are mortal, an assumption which may or may not be true, but which is manifestly incapable of proof, if true.

And so it is through every department of dialectic science. All the things we consider most clear, most safe, most incontrovertible, are propositions that either in themselves are incapable of proof, if true, or propositions which rest upon other propositions that cannot be proved to be true, even if they are true, and, what is more, cannot be disproved if they are false, as they are outside of reason and apparently can have no residence outside of faith.

No religious superstition involves a larger and more gratuitous, unproved and unprovable assumption than the primal and indispensable dogma of dialectics. That immense assumption I think I most clearly perceive; and yet I stand up here and solemnly and sincerely say, "*Credo!* I believe in the Aristotelian dictum, *de omni et nullo*." And when I repeat this creed, all men who belong to the Catholic Church Scientific, are bound, under penalty of excommunication, to respond "Amen."

From mind let us now turn to matter. If there be anything of which we ought to know something, it is matter, and the constitution thereof. Matter is open to all our senses. If we cannot ascertain what matter is, can we learn anything absolutely?

Now what does science teach us in regard to matter?

To ancient thought, matter was infinitely divisible. It was apparently fairly argued that it is impossible to conceive of particles so small as not to be capable of division. But, the mod-

ern chemist assumes that, in point of fact, the divisibility of matter has a limit. This is what Liebig says: "The chemist merely maintains the firm and immutable foundations of his science when he admits the existence of physical atoms as an incontrovertible truth."

Now, it so happens that what is assumed to be an incontrovertible truth in regard to the constitution of matter is a proposition, which, if true, cannot be demonstrated, and which, if untrue, cannot be refuted by demonstration. No man pretends to have ever seen an atom.

Moreover, it presents for our belief as absolutely fundamental to all physical science that which we cannot even conceive.

Look at the very name, "atom," that which cannot be cut or divided; *i. e.*, has no parts. To believe the accepted doctrine of the ultimate constitution of matter we accept two propositions that are absolutely irreconcilable. We believe in the existence of some matter so small that it cannot be cut or divided, while we believe that no matter can exist without the very qualities which furnish the basis of conceivable subdivision.

In our imaginations we divide and subdivide, and re-subdivide, and follow out these imaginings of subdivisions infinitely; that is to say, we may be engaged in this process for millions of years, doing nothing else, and yet there will remain in the mind the concept of a particle of matter, on which the imagination can play with scissors of infinite smallness, still subdividing *in saecula saeculorum*.

An atom is not only an unknowable, but an unthinkable thing to any mind that is not infinite. You must first believe in a person of boundless intellect before you can form to yourself the idea of a person who can even *think* "atom," much less *know* "atom"; that is to say, a person who can have an intelligent cognition connected with the word "atom" must have a power of perception to follow down abysses of subdivision beyond all that man can accomplish in this department of thought. But it is held by many to be a superstition to believe in the existence of such a person, because that would be to believe in what can not be proved, if true. A man who should believe in such a personality would be as irrational as the man who believes in an

infinite God If it be superstition to believe in a God of infinite personality then science fosters superstition when it comes to us with its first fundamental proposition in regard to the ultimate constitution of mere matter, and demands of us belief in that which is as difficult of conception as any infinity and which requires for the existence of the conception of itself a previous belief in a personal equal to an infinite God.

There is much more superstition in believing the atomic theory than in believing what any Deist or any Trinitarian or any Polytheist believes.

In this connection science demands some other things of us, viz.: that we shall believe that all the atoms of the same element possess exactly the same weight; that the atoms of different elements possess different weights, and that the number indicating the weight of the atom of any element is the same in the combining or equivalent number for that element.

Well here again a great demand is made upon our faith. An atom is infinitely small, that is, has no size whatever; for if it have size it can be divided. But having no size we must believe it has weight, and all atoms must be of the same size since they all have no size; and yet, being of the same size they have different weights, although none of them can have any weight, because, they have no size. An atom that has weight is an inconceivable thing. No superstition of Christian, Mohammedan, Jew, Pagan or savage ever demanded of its devotees what we all most steadfastly believe who adopt the modern science of chemistry. That science depends upon this proposition: that any compound substance has exactly the same constituents in the same proportions wherever found.

Take two examples, water and common salt.

Each molecule of water invariably consists of two atoms of hydrogen and one atom of oxygen (H_2O). The weight of an atom of hydrogen (which is the lightest known element) is represented by the figure 1, and it is taken as the standard of comparison of the atomic weights of other substances. Compared with an atom of hydrogen, an atom of oxygen weighs 16.

A molecule of common salt consists of one (1) atom of chlorine 35½ times heavier than an atom of the standard of comparison,

hydrogen, and one atom of sodium, which is 23 times heavier than the hydrogen atom.

Upon analysis we get these quantities; in synthesis we use these quantities. Water, salt, and all other compound substances are put together in obedience to certain fixed laws of proportion, invariable in the same kind of compound, although different in the different substances. Matter has a mathematical constitution, so mathematical that we can form tables expressive in numbers of the constitution of any chemical compound.

Oxygen, whose atomic weight is, as we have seen, 16, combines with carbon, whose atomic weight is 12, in two proportions. First, in the proportion of an atom of each, giving rise to the compound *carbonic (mon)-oxide* (CO), whose molecular weight is therefore 16 *plus* 12, or 28; second, in the proportion of 1 atom of *carbon* to 2 of oxygen, forming the compound *carbon di-oxide* or *carbonic acid* (CO_2) whose molecular weight is 12 *plus* 16 *plus* 16, or 44.

It will be perceived that the proportion of oxygen in *carbonic-acid* is a multiple by 2 of that in *carbonic-oxide*.

Again, the atomic weight of nitrogen is 14; *i. e.*, one atom of nitrogen is 14 times as heavy as an atom of the standard, hydrogen. Up to date we have made ourselves acquainted with five distinct chemical compounds of nitrogen with oxygen, *viz.:*

1st. Nitrogen mon-oxide, containing 28 parts by weight of nitrogen to 16 of oxygen.

2d. Nitrogen di-oxide, containing 28 parts by weight of nitrogen to 32 of oxygen.

3d. Nitrogen tri-oxide, containing 28 parts by weight of nitrogen to 48 of oxygen.

4th. Nitrogen tetr-oxide, containing 28 parts by weight of nitrogen to 64 of oxygen.

5th. Nitrogen pent-oxide, containing 28 parts by weight of nitrogen to 80 of oxygen.

It will be seen that the oxygen contained in these compounds is in the proportion of the numbers 1, 2, 3, 4, 5, to one and the same quantity of nitrogen, a striking example of what science teaches as the law of chemical combination in multiple

proportion; always a simple multiple and never an intermediate quantity.

It is also held that numerical laws of combination apply to compounds as well as to elements.

Now what is the demand on this ground which science makes of us? It is that we shall believe in some personality who has the intelligence and power to dive far below the soundings of the plummet of human observation into a region to which the most powerful microscope has no passport, and there shape things so small that they can have no size, and yet are capable of uniting with one another according to certain fixed laws of proportion and according to no other, so that it is utterly impossible that men can invent any way of contravening these proportionate combinations. One atom of oxygen must always and everywhere unite with two atoms of hydrogen to produce one molecule of water. It is not in the skill or power of man to reverse this proportion and make 1 of hydrogen unite with 2 of oxygen. There is a fatalism, iron, adamantine, unbreakable, through all the physical universe, and I must believe this if I am going to pursue the study of chemistry. I cannot explain it, nay, I cannot conceive it, but yet I must believe that two things, neither of which in the nature of things can have any weight—because the moment either has weight it ceases to be an atom—that two things, each of which has no weight, come together with one other thing that has no weight, and that these three things that have no weight produce a fourth thing that has weight, and that these proportions are fatal. We call the Mohammedan superstitious, who, when the stroke of fate comes, quietly says, “Allah il Allah,” and submits, because he believes that everything is weighed, and measured, and fixed in the scales of his fatalistic God; not only believing with the Christian in a general and a special Providence, but believing that no man can draw one breath more or less, live one minute more or less, than that which is fatally allotted. There is nothing in any religion a greater superstition than the belief which science demands in offering the atomic theory to our minds.

With open eyes I see that the atomic theory lies wholly outside whatever may be claimed as rationalism, and wholly within

the region of imagination, or faith, or superstition, and yet If stand up here and solemnly and sincerely say, “*Credo!* I do believe in a doctrine which applies definite and unalterable proportions to those things which can have no proportions.” And when I repeat this creed, every professor of physical science, even when he suspects that this dogma is soon to be numbered with the dead scientific beliefs which lie around the cradle o Progressive Thought like the strangled serpents* around the cradle of the infant Hercules, and every believer in the current science of the world, on pain otherwise of being excommunicated from the Catholic Church Scientific, is bound to respond “Amen.”

The phenomena of Radiant Heat and of Light create the genesis of another scientific superstition.

“Heat,” said Mr. Locke, “is a very brisk agitation of the inscrutable parts of an object which produces in us that sensation from which we denominate the object hot; so what in our sensation is *heat*, in the object is nothing but *motion*.” This theory has been maintained and greatly illustrated by researches since the time of Mr. Locke. It is now held that all particles of all matter are always in motion, so that in all matter there is more or less heat. Prof. Tyndall has treated magnificently of “Heat as a Mode of Motion.” Heat existing anywhere produces motion, and motion produces heat. Two plates of metal, say one of zinc and one of platinum, may be placed in a vessel containing acid. Kept apart in the acid, let them be connected outside by a copper wire. What happens? What is called an electric current is generated by the chemical action of the acids on the metals. This can be made sufficiently powerful to produce heat that shall travel through the surrounding air or long conductors, and be raised to so high a temperature as to be luminous.

The motion of particles in the sun generates a heat which comes over the great space of more than 95,000,000 of miles to our atmosphere, and through our atmosphere to the earth, and to

* For this figure I acknowledge my indebtedness to Prof. Huxley, who says, “Extinguished theologians lie about the cradle of every science, as the strangled snakes about that of Hercules.”

This paragraph was written in the summer of 1878. Perhaps before its publication the atomic theory may be abandoned. So fixed are the foundations of “science”!

all things that exist on the earth. This heat is the effect of the pulsation of calorific particles, a pulsation which generates a system of waves, which waves impinge on our nerves and give us a sensation the consciousness of which we call heat. But what sustains that system of waves? Along what is it propagated? We think that we know that it is atmospheric air through which the sound-waves are propagated to our auditory nerve. But these heat-waves have come over vast cold tracts, the coldness of which is so frigid as to be incapable of thermometric measurement, in which atmospheric air can have no existence. What is it that has been undulated? If I hold a long iron rod by one end while the other end is in a furnace in full blast, by and by the rod will become so hot, that is, contact with it will so increase my consciousness of the sensation produced by heat that I must drop the rod. From the furnace to my hand how did the heat travel? Not along the line of the iron atoms, for they have not undulated, and no two of them are ever in contact or can be made to touch each other. Heat makes the atoms withdraw from one another. What, then, undulated? A something which science calls *ether*.

Again: For many years Newton's theory in regard to light prevailed throughout the scientific world. It was believed that luminous bodies emitted particles of exceeding fineness, and that these particles falling upon the back of the eye, gave us that which we receive from light. How these particles were driven over such immeasurable spaces, and how, when they reached the eye, they passed through the ball to the retina was not explained; but in the face of the well-known fact that the smallest conceivable particle of matter, coming from the distance at which light from the sun would enter the eye, and driven with the momentum necessary for the diffusion of light over such measureless spaces, would utterly destroy the eye; still the emission doctrine of light was believed by hundreds and thousands of intelligent, scientific men. Nothing more thoroughly absurd, nothing more contrary to the facts in nature, and reason in man, has ever been believed by any body of pagan, Jewish or Christian theologians. It was a mere superstition, the high-priest of which was no less a person than the justly revered Sir Isaac Newton.

Nevertheless even scientific men are not going to rest quietly under the burden of the same superstition forever; if they can do no more, when they become tired of bearing the burden upon one shoulder, they will shift it upon the other.

The prevailing superstition amongst us now is what is called *the undulatory theory of light*. The phenomena of light are supposed to be the results of waves, waves gendered by the pulsations of the particles of a luminous body. These waves are supposed to travel at a right angle with the pulsations, and it is thought that figures are produced upon the retina of the eye by the termination of these waves, as sound is produced upon the auditory nerve in the ear by the termination of waves coming through the atmosphere. A wave is not matter, but is a condition of matter. A little boy at a tub of water puts his cork in the centre and fancies it a ship. He then agitates the water at one side and creates waves which travel across the tub. His cork bobs up and down in the same place if it be not attracted toward his hand, nor driven to the opposite side of the tub. A wave passes through the water and lifts and lowers the particles at the surface of the water, the peculiarity being that the last which is lifted is the first lowered. Now, every wave requires matter, which matter may recede from solidity more or less, but must be elastic.

To account for light the hypothesis is adopted that throughout the universe there is a medium which, for want of a better name, we call ether. This medium pervades all the most solid bodies, all liquids, and all gases. It is a boundless ocean of substance, on which all other substances float. No two atoms of the most compact mineral or vegetable substance, hammered gold leaf or *lignum vitæ*, are in immediate contact; they never can be made to touch. They can be caused to separate by increase of heat, or to approach by decrease of heat; but mark, it is not the atom that is heated, it is the ether in which these atoms of matter exist. When we have come down to the ultimate constitution of matter there is a perpetual separation between the atoms; that which separates is that which holds them together, and that is ether. We get sound by motion of the atmosphere, but the atmosphere itself is an exceedingly coarse thing as compared

with the ether. The particles of the air are in the ether. It is not the ether that is disturbed by the sound producer, it is the atmosphere; and no matter how rare that atmosphere may be, its particles are to the ether, as a dozen cherries in a goblet of water are to the water. That is to say, that when atoms of the material universe are put, so to speak, in the cup of the universe, the ether may be considered as the water that is poured into the goblet, and fills up all the interstices between the globules.

You make a very thick plate-glass and hold it up to the sun. Light comes through. We must remember that that light has come through something which is not air, because our atmosphere does not extend much more than fifty miles toward the sun, while the light has come millions of miles through something, or through nothing, before it reached our atmosphere, and has then come through our atmosphere, and then, instead of impinging upon the glass, and finding its path arrested, it has gone through the glass, in which there is no more air than there is in the wide celestial spaces. Now what is this path along which light can travel? It is something capable of being agitated into waves, of size greater or less. We call it ether. It exists in the dark—in the dread dark of the inter-stellar spaces. Light lives in the sun, is buried in the space which intervenes between the sun and the earth, and finds its resurrection in our atmosphere, and its heaven in our eyes. But a continuous wave system, from the throbbing, luminous particles in the sun to our eye, is necessitated by this hypothesis, and the substance which sustains this wave system we call *ether*.

This is our sublimest scientific superstition. Mr. Tyndall says that "the most important physical conception that the mind of man has yet achieved" is "the conception of a medium filling space, and fitted mechanically for the transmission of light and heat, as air is fitted for the transmission of sound." ("Fragments of Science," Eng. ed., pp. 176, 177.) He also says, "If a single phenomenon could be pointed out which the ether is proved incompetent to explain, we should have to give it up; but no such phenomenon has ever been pointed out." (*Ibid.* p. 223.) The brilliant professor may be a little rash in this statement. We shall not give it up for failing to explain some

“single phenomenon.” We shall hold to it, although if it be true it is utterly impossible of demonstration; we shall hold to it until some other superstition more powerful to charm our imagination shall drive this from the field.

Assume that this ether is matter, however fine. If so, the whole body of ether, like the whole body of the atmosphere, must be composed of atoms which do not come in contact with one another. What fills the interstitial spaces then? Some still more ethereal ether? If so, that finer ether must be composed of atoms floating in some superfine ether, which superfine ether is composed of atoms floating in superfiner ether, and so on, *ad infinitum*.

O, do not be profane and laugh, good friends, and say that our “most important physical conception” is akin to the oriental superstition of the world standing on an elephant, and that on a huge tortoise, and so on down, one thing standing upon another thing so far down as to go beyond the boundary of our vision in depths, down which to look makes us so dizzy and sick that we do not longer care whether everything is nothing or nothing is everything.

But as touching ether this is our sincere creed. We believe that there is a substance that pervades all space. It is of infinite elasticity, and is wholly unaffected by gravity. It is absolutely indispensable to hold, meanwhile, that gravity affects every single particle of matter, that nothing is matter which is not under the law of gravity. Moreover, the general belief is that everything is either matter or spirit, although there are those who believe that no substance exists except matter, and that what seem to be phenomena of mental action are simply products of matter of the finest kind, operated upon by some special force in some special manner, thought having the same relation to the brain as bile has to the liver.

What, then, do we make of ether? It is either matter or not matter. Is it matter? It has been calculated there are 11,000,000,000 times more of it than of all other matter. It is infinitely elastic. It is wholly unaffected by gravity. It is omnipresent, through all, in all, with all. If ether be matter, then gravity, which operates by a fixed law on all matter, with a force which

diminishes as the square of the distance increases, gravity finds some matter *everywhere*, matter which in bulk exceeds all other kinds of matter and yet which is wholly free from its influence.

If ether be not matter, it is spirit, and we have an infinite omnipresent spirit everywhere invasive and pervasive. If ether be matter, it is a God's body; if not matter, it is a God's spirit. There is where we are all landed by science.

No religious superstition involves greater contradictions than the doctrine of ether. I see some of them; and yet I stand up here and solemnly and sincerely say, "*Credo!* I believe in a substantial medium, filling all space, even that space which is occupied by other matter, while I believe that impenetrability is one of the essential qualities of matter, and that being vastly the largest part of all matter, ether lacks the essential qualities of all matter." And when I repeat this creed, every man who desires to continue in the membership of the Catholic Church Scientific, is bound to respond "Amen."

There is another superstition of science which we so firmly believe, that upon the baseless dream of our imagination we not only rest all of our scientific investigations, but also shape our practical lives. It is the superstitious belief in what is called "the uniformity of nature"; by which is meant the perpetual succession of physical events hereafter as we have observed them heretofore.

Here is a belief in the future—in the future of forever; a belief that all things in nature will continue so long as history *can be made*, and that they will continue in the order of recurrence and succession which they have exhibited so long as history *has been made*. The fact is, this proposition is received as being an axiom; but that this is not so is apparent from the fact that the opposite is not self-contradictory, whereas the opposites of axioms are always contradictory. We cannot conceive, for instance, in mathematics, of a whole which is less than any one of its parts, or of a part which is greater than the whole of which it is a part. Such a proposition contradicts the essence of its own terms. But, we can think of a total suspension or destruction of gravitation; we can think that there should be no sunrise

on the morrow; we can think of a total collapse of all the known forces of nature, and John Stuart Mill could think of a world in which the connection between cause and effect may not exist and in which two and two do *not* make four.

Not only is the superstition of a continuance of the order of nature not self-evident, but there is absolutely no reason to be assigned for it. The succession and recurrence with which we are familiar are due to no cause or to some single cause, or to many causes. If they are due to no cause, and are the mere products of chance, then there is no reason to believe that that same chance may not some day assume the condition of chaos as it now seems to retain the form of cosmos. But if they be due to causes, there is not a particle of evidence that the causes of the existing cosmos may not some day become the causes of the chaos. No matter how often any act, or series of acts may have been repeated, we can get from this repetition no absolute assurance that it will not come to a close. It is just as reasonable to suppose that the millions of times in which succession of events has occurred may only have brought that succession nearer to its point of termination as to suppose that these repetitions give us ground to believe that they will be continued. Indeed, the former is the more reasonable supposition, because it is more consistent with what we know, or believe we know, of the past physical history of the universe.

Take the case of our own planet. It is believed that at one time it consisted of a mere vapor; that at a second stage it was a hot liquid; just at present, in its third stage, it is a cooling solid. Now, let us fancy that the planet, earth, when a mere inconceivably intensely heated mass of gas, had rational inhabitants. It was a long time in that condition. There might have been generation after generation of inhabitants of that world of gas. Let us fancy them observant, communicative and remembering creatures, like ourselves. Let us fancy that they had had scientific men amongst themselves, as we have amongst us. Those earlier sons of gas might have gone back through a period longer than the historical era of the human race, and have appealed to certain phenomena like our rising and setting of the sun, like our seed-time and harvest, like our summer and winter, and they might have

scouted as a superstition the belief that ever the planet would come to be a molten mass. Now we know, looking back, that these philosophers of the age of gas would have been resting their intellects on a superstition—a superstition as thoroughly such as if the inhabitants of the molten mass had believed that all things would go on in the world forever and ever just as things were going on in that molten mass. In their turn they might have scouted the idea of the planet solidifying to such a degree that the swirling waves of molten sea should be piled and fixed in alpine peaks, and invisible gas descend to liquid water, and the liquid water grow into solid, rocky ice, such as makes the barriers of our polar regions. They would have argued that this was contrary to experience, and so could never occur; and to believe that it ever would occur would have appeared to them to be as superstitious as to believe in miracles.

We readily perceive that those philosophers existent in the gaseous or molten planet were themselves subject to a scientific superstition. And yet the superstition is the belief of the science of this day, and is made the basis of the rejection of the Christian religion because of its teachings regarding miracles. Miracles are contrary to our experience, says Mr. Hume, and experience is the foundation of all our reason and conclusions concerning the relations of cause and effect. But we perceive that there is nothing in the logical understanding to give any basis for our reliance upon our experience in regard to what belongs to the future, because we never have had, and cannot possibly ever have, any experience of the future.

We freely admit because we cannot fail to perceive that our experience and our science are in conflict. The experience of the rational beings now inhabiting the earth is that all things have continued as they were. We superstitiously conclude that all things will continue as they are. We conduct all our astronomical investigations and all our experimental tests and all our logical processes on this assumption, whereas our most trustworthy conclusions from those same investigations, tests and processes, tear up the very basis on which they are erected. And this is shown in this way:

Every year there is such radiation of heat into space as, while

it is almost imperceptible in brief spaces of years, must, in process of time, so decrease the velocity of the earth's motion on its axis, that the earth's day will become identical with the earth's year. A similar thing actually occurred in the case of our moon, the rotation of which on its axis has become identical, as to time, with its revolution around the earth. What is true of the earth is true of the other planets. Many phenomena reveal the fact of perpetually dissipating energy, of a dissipation which we are taught must finally cause all the planets to fall into the sun.

We also know that long before such a catastrophe could occur this planet may collide with others. We have never yet passed through the nucleus of a comet. We never may. Yet, we may. It is supposed that more than once we have passed through the tails of comets. But we do not know of what a comet's nucleus is composed. We never may. The chance that we may make collision with any one comet is extremely small, but who can tell the number of comets?

The apprehension from that quarter may be insignificant, but when we learn that very many of the comets have hyperbolic paths over measureless spaces, our science teaches us that there must be dark bodies existing in those far-off spaces, bodies large or small, few or many, but probably multitudes. When the coasting mariner perceives a variation in the brightness which shoots over the dark sea from some light-house in which there is a rotating lamp, he knows that between his eyes and the luminous flame in the pharos some dark body has intervened. When, sailing this illimitable ocean of space, the astronomic mariner lifts his telescope, he perceives stars, the brightness of which has such variations that he calls them "periodic stars." What causes that variation? He cannot tell.

Around the far-off sun which we call a star, there may be the revolution of some other star, which cooled until its luminousness departed and left it dark on its orbit. At its normal rate of movement it would require tens of thousands of years for our sun to reach the nearest known star, but as he sweeps toward it, and carries our planet in his train, who can tell against what dark solid mass we may not dash in sudden and irremediable world-wreck? It is as if a ship at sea in darkest midnight,

rushing forward under full head of steam, should drive against the logged hulk of an unknown steamer, the fires and lights of which had all become extinguished, as in sea-troughs she rolled, rudderless. Science proves that possible.

Again: Who knows what mass of hydrogen may lie along the path of our system into which sun and planets and satellites may all rush as that great mass of gas explodes, to involve the entire solar system in one instant in the most utter destruction? Science proves *that* possible.

Again: Who knows but that the sun itself may some day explode? And who believes that if such a thing should occur our planet would go forward in quiet orderliness and all things should continue as they have been?

If the Great Eastern, laden to her utmost capacity with nitro-glycerine, were sailing the seas in company with smaller crafts, and in a moment that whole mass of destructive material should explode, and the vast ship be sent in splinters over the waters, do we believe that the silence of mid-ocean would remain amid that detonation as unbroken as it was before, and that all things, on the small accompanying crafts, would continue as they were? Science sets before us as possible that this earth may perish by reason of some terrible solar explosion.

Moreover, the smallest craft, in the fleet we have imagined, may carry in its hold that which, by reason of its confinement or from agencies set at work by the motion of the vessel, may explode and rend the vessel into fragments. Would all things, after such an occurrence, continue as they were? Science proves that the disruption of this planet from internal causes is far from being impossible.

But aside from any thought of a cataclysm which should be universal destruction, there is no assurance that the law of gravitation may not be changed or be abolished, nor that the law of reflection may not be modified or abolished; nor that the law of the correlation of forces may not be disturbed, or totally abolished. The belief in the order of nature lies wholly outside the realm of rationalism and entirely within the domain of superstition. I know that the proposition of the order of nature is not an axiom. I know that no one ever has proved it. I believe that no one

ever can prove it. I am acquainted with no one who believes that it can ever be demonstrated.

No religious superstition involves graver contradictions than the doctrine of the uniform order of nature; I see some of them, and yet I stand up here and solemnly and sincerely say, "*Credo!* I believe in the future continuation of that succession and recurrence of physical events of which men have had experience." And when I repeat this creed, not only all the men who belong, to the Catholic Church Scientific, but all other men who are capable of comprehending this utterance, will feel bound to respond "*Amen.*"

What now is the practical conclusion of the whole matter? Shall we abandon our science because its fundamentals cannot be verified? Shall we abandon logic because the "*omne*" and the "*nullum*" involve a universality which cannot be verified? Shall we abandon the atomic theory of the ultimate constitution of matter because the existence of atoms cannot be verified? Shall we abandon the hypothesis of the existence of an infinitely fine and ethereal medium through which calorific and luminous rays are propagated, because the existence of ether cannot be verified? Shall we abandon the dogma of uniformity in nature because the whole future, the nearest as completely as the most conceivably remote, is absolutely excluded from all human experience?

Nay, verily. Why not? Simply because, whether we can prove them or not, *we cannot do without them*. Without the reception of the unverifiable in logic we cannot reason. Without the reception of the unverifiable in the material world, we can have no physical science with all its rich results in mental culture and material advancement. Without the reception of the belief in the unverifiable of the future we could have no practical life in the present. Reject all these superstitions, if you insist on calling them so, and you lie down to die, as starved in intellect as you will be starved in body. *The things verifiable are useful; the things unverifiable are indispensable.*

When, then, we turn to another part of our nature, shall we

starve out our souls by rejecting the unverifiable in the spiritual world? A recent writer, Matthew Arnold, tells us in his preface to "Literature and Dogma," that we are to yield as untenable our belief in the existence of an intelligent First Cause, that is, in God, because the hypothesis of such an existence cannot be verified! But such a belief is the basis of all systems and any system of religion or morality. If for the reason assigned we must give up belief in God, give up belief in the juncture of the divine and human in Jesus for some purposes of atonement, give up the belief in the influences of the Holy Ghost, then we must give up all science, all systematic knowledge, and human progress.

No, we can give up neither these latter nor those former beliefs, because *we cannot do without them*. To abandon the former is to change the visible to the invisible ; to abandon the latter is to reduce the invisible to nothing. To him who is brought to such a state of mind, Time and Eternity confront one another like sphinxes, between whose faces of eternal reticence the forlorn unbeliever stands, a being capable of making both utter the noblest and divinest unverifiable truths, while in their silence he is born a puzzle and dies a riddle.

The fact is that man has in himself the double capacity of believing on proof and of believing above proof. Faith and Reason climb the ladder hand in hand, until the topmost standpoint of the visible is reached, and there Reason pauses but Faith goes on ; goes on and goes up, not treading vacuity, but planting its footsteps on the rungs of a ladder invisible indeed, but just as existent and as strong as anything which appears to sight. Reason cries out to Faith, "Come down; you are in the region of superstition." It is true; there is something which *stands above our reason*; there is something the existence of which can no more be made manifest to reason than the non-luminous rays of heat, or the actinic solar rays, can be made perceptible to the optic nerve.

In England John Henry Newman and John Tyndall, in America John William Draper and John McCloskey have all flourished. Two of these Johns were religious and two scientific ; but these four Johns were all, and singular, as supersti-

tious as that greater John on whose blessed eyes broke the splendor of the apocalyptic vision on Patmos.

And all these men believe what you and I must believe, that there is something unverifiable which is not incredible. Man's faith seizes that which is above ; his reason touches that which is below. And call it superstition or what you please, it is because man has faith that man has reason. The more tenaciously a man clings with the hands of his faith to the unseen things which are unproved and unprovable, the more securely does he plant his feet on the things which are seen and are capable of verification.

THE CENTURY PLANT.—Bishop Coxe, in “Mind and Nature” : To make my meaning clear, as to that which may require preternatural knowledge for its explanation, while it is yet perfectly natural in itself, my favorite illustration is the century plant. The venerable “Adam,” who has lived in the garden at Chatsworth, man and boy, for eighty years, might exhibit a fine specimen of the *Agave*, to a visitor from Mexico, and enlarge upon the nature and habits of the plant. “Yes,” says the stranger, “it is just about to flower.” “Flower, your honor,” says the gardener ; “it never bears any flower.” “It is the American aloe,” rejoins the traveller ; “I know the plant ; and you will soon see it shoot up with twenty feet of stem and blossom.” “Can't know it any better than I do, your honor,” replies old Adam: “I've seen it every day these seventy years—since the old lord imported it—and I can tell you it never bears any flower.” “You'll see,” says the señor Mexicano, and Adam almost dies with wonder and admiration when, after a hundred years of torpid and barren vegetation, he finds the plant putting forth new powers and properties, and going off, like a swan, in a sort of harmony that means *nunc dimittis*.

Who knows what undeveloped efflorescences may belong to the great globe itself? Who knows much about the laws of Nature till ages of observation shall have tutored the human mind into virility, if not into humanity—let us say nothing of divinity?

THE APOLOGETIC VALUE OF PAUL'S BELIEFS.

[A Lecture delivered before the American Institute of Christian Philosophy, August 21st, 1886.]

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EVERY age must re-examine the grounds of its own beliefs and reaffirm or formulate anew its own symbols. All truths become valuable to us in the proportion in which they enter into our own thought and life, and they can only do so when, through patient study and self-appropriation, they have become a part of ourselves. We must work over afresh the materials of truth which the past has furnished us, we must consider them in the light of our own times, we must ascertain how far the arguments which originally supported them still remain firm, before we can give them our unqualified assent. This is especially the case with our religious beliefs. Mr. Martineau, in his plea for philosophical studies ("Essays Philosophical and Theological," page 400), says: "You might set up the electric telegraph among the New Zealanders and train them to its use; and the Indians and the Chinese are said to have command of many mechanical rules and astronomical methods, the grounds of which they have for ages ceased to understand. A people thus the depository of a transmitted skill may continue, amid stagnation and decline, to send their messages and to construct their almanacs with curious precision, and may profit by the science of the past. But the higher truths of morals and religion have another abode than in posts and wires, and cannot be laid down in cables through the sea; no equation can contain or usage work them. They subsist only for him who discerns them freshly out of himself; they are realized in so far as they are apprehended; and their very use and application being at the heart instead of the surface of our nature, their function is extinct when they cease to be rediscovered and rebelieved

and are only remembered and preserved. In other words, it is the thirst for fresh truth which can alone retain the old; and the intellect not less than the character will not even hold its own when it ceases to pray and to aspire."

This profound statement in reference to philosophy has its application in no field of thought more appositely than in that of Christian evidences, and the student of religion who ignores the present modes of thinking and investigation, will be as much astray as he who in the study of the present ignores the past. It would be as fatal to the progress of religion as to intellectual development to cease the discussion of its fundamental themes. It would overthrow not doctrine only but life. It is in this spirit of inquiry that we propose a consideration of the "apologetic value of Paul's beliefs." The beliefs of Paul have regard to the matters of fact fundamental to the Christian faith, and have had a wide influence on mankind. Are they still satisfactory and reliable after the lapse of eighteen centuries?

It is assumed on proof which cannot be questioned that Paul, a bigoted and conscientious Jew, became a sincere disciple of Jesus Christ, and recognized Him as the Messiah; that the Acts of the Apostles which records his life contains a veritable history; that the Epistles to the Romans, Corinthians and Galatians are his genuine productions. This much at least is acknowledged by the avowed antagonists of a supernatural religion. In this at least we have a basis of discussion which will not be questioned at the present time, and least of all by those who have most carefully studied the subject.

From these acknowledged writings of Paul it is certain that he believed in the divine origin and authority of the Old Testament, in the personality of Jesus Christ, including His incarnation, burial, crucifixion and resurrection, as recorded by the four Evangelists. He believed therefore in these great historic facts concerning Christ, as now accepted by evangelical Christendom. They are not only distinctly asserted by him, but so interwoven with his whole writings that his writings would be unintelligible without these facts as the key.

In the beginning of the fifteenth chapter of I. Corinthians, he declared these doctrines, and especially the resurrection of Christ,

to constitute the essence of his preaching: "Moreover, brethren, I declare unto you the gospel which I preached unto you, which also ye have received, and wherein ye stand; by which also ye are saved, if ye keep in memory what I preached unto you, unless ye have believed in vain. For I delivered unto you first of all that which I also received, how that Christ died for our sins according to the Scriptures ; and that He was buried, and that He rose again the third day according to the Scriptures." In these words we have the substance of the creed of Paul, a formulation in harmony with all that he writes elsewhere. On this chapter Dean Stanley remarks ("Commentary," *l. c.*): "It contains the earliest known specimen of what may be called the Creed of the Early Church. In one sense, indeed, it differs from what is properly called a creed, which was the name applied, not to what new converts were taught, but to what they professed on their conversion. . . . But the present passage gives us a sample of the exact form of the oral teaching of the Apostle. . . . Amongst the various forms of the creeds of the first four centuries there are only two (those of Tertullian and of Epiphanius, from whom, probably, it was derived in the Nicene Creed) which contain the expressions here twice repeated, 'according to the Scriptures,' and in these two probably imitated from this place."

Eighteen centuries have passed since Paul committed his beliefs to the world. Have his beliefs any value for us to-day ? May we still rely upon them, in view of the assaults of the later criticism ? The special emphasis of any discussion of Paul's beliefs lies in the testimony which they offer to the existence of the miraculous, in this particular instance in the resurrection of Jesus Christ. We propose no formal discussion of miracles, but a reference to them is fundamental to any statement of Paul's beliefs. The subject naturally divides itself into two parts : 1. Is a miracle a proper subject of proof by the ordinary laws of human testimony ? and, 2. What is the nature and force of the testimony offered by the Apostle Paul ?

One of the most recent statements of the present position of scientific thought on the miraculous, from the stand-point of adverse criticism, is found in the "Life of Joseph Hume," by Prof.

Huxley. Mr. Huxley is one of the most eminent of thinkers of the scientific school of thought, and his utterances may fairly be regarded as representing the latest deliverances on this question. The book is written of course with that clearness, incisiveness and force which mark all the writings of this eminent scientist. If an apology were required for a layman in science venturing even on the border-land of that subject, it may be found in the fact that scientists have not hesitated to enter with boldness the field of biblical criticism. Prof. Huxley says : "Science is but the application of common sense to these matters." We may therefore apply to his work what, to us at least, seem to be the canons of common sense.

Prof. Huxley does not confine himself to the statements of the positions of Hume, but he comments upon them at length and notes some points of divergence between himself and the sceptical philosopher whose biography he is writing. It is with his views as expressed in this book, rather than with those of Hume, that we have at this time chiefly to do. He lays down the following canon, which as a general law there need be no hesitancy in accepting, viz.: "The more a statement of fact conflicts with previous experience, the more complete must be the evidence which is to justify us in believing it."

It would seem as if the inspired writers who narrated these events had themselves been conscious of this canon, for they give a vast amount of testimony on those parts of the history of Christ which the sceptical would be most likely to challenge. The incidents of the incarnation and of the resurrection are described by the Evangelists with special minuteness, and Paul, the great expounder of the Gospel, in the fifteenth chapter of first Corinthians, undertakes the demonstration of the resurrection of Christ from human testimony.

When Prof. Huxley, however, undertakes the illustration of his position, the divergence between his views and those of Christians clearly appears.

The first point to which I call attention is in relation to the nature of a miracle. He gives the following illustration of his views : "If a man tells me he saw a piebald horse in Piccadilly, I believe him without hesitation. The thing itself is likely enough

and there is no imaginable motive for his deceiving me. But if the same person tells me he observed a zebra there, I might hesitate a little about accepting his testimony, unless I were well satisfied, not only as to his previous acquaintance with zebras, but as to his powers and opportunities of observation in the present case. If, however, my informant assured me that he beheld a centaur trotting down that famous thoroughfare, I should emphatically decline to credit the statement ; and this even if he were the most saintly of men, and ready to suffer martyrdom in support of his belief. In such a case I could, of course, entertain no doubt of the good faith of the witness ; it would be only his competency, which unfortunately has very little to do with good faith or intensity of conviction, which I should presume to call in question. Indeed, I hardly know what testimony would satisfy me of the existence of a live centaur. To put an extreme case, suppose the late Johannes Muller, of Berlin, the greatest anatomist and physiologist among my contemporaries, had barely affirmed he had seen a live centaur ; I should certainly have been staggered by the weight of an assertion coming from such an authority. But I could have got no further than a suspension of judgment. For, on the whole, it would have been more probable that even he had fallen into some error of interpretation of the facts which came under his observation, than that such an animal as a centaur really existed. And nothing short of a careful monograph, by a highly competent investigator, accompanied by figures and measurements of all the important parts of a centaur, put forth under circumstances which could leave no doubt that falsification or misinterpretation would meet with immediate exposure, could possibly enable a man of science to feel that he acted conscientiously in expressing his belief in the existence of a centaur on the evidence of testimony. Judging by the canons of either common sense or science, which are indeed one and the same, all miracles are centaurs or they would not be miracles ; and men of sense and science will deal with them on the same principle." The last part of this quotation, which I have given at length, is the key to a fundamental mistake of Prof. Huxley, and of his school. It lies in the phrase, "All miracles are centaurs."

It were well to notice our points of agreement and also of divergence. The force of his canon, viz.: "The more a statement of fact conflicts with previous experience, the more complete must be the evidence which is to justify us in believing it," is admitted. No one questions the necessity of strong evidence to prove a miracle. It is also admitted that the evidence to prove that a man has seen a "live centaur" must be very well sustained, and I cannot myself conceive of any evidence which could demonstrate the existence of a live centaur.

The error of Prof. Huxley lies in part in a misapprehension of the nature of a miracle. Our word miracle has a Christian sense, which is accepted, and around its recognized meaning the discussion must turn. He recognizes this necessity of exact definition, saying: "The first step in this, as in all other discussions, is to come to a clear understanding as to the meaning of the terms employed. Argumentation whether miracles are possible, and if possible, credible, is mere beating the air until the arguers have agreed what they mean by the word 'miracles.' Hume, with less than his usual perspicuity, but in accordance with a common practice of believers in the miraculous, defines a miracle as a 'violation of the laws of nature, or as a transgression of a law of nature by a particular volition of the Deity, or by the interposition of some invisible agent.'" It is to be observed that Prof. Huxley will not allow Hume's definition of a miracle, for it postulates a deity, which Huxley's view does not; but he substitutes a definition of his own. "The word 'miracle'—*miraculum*—in its primitive and legitimate sense, simply means something wonderful." It is not surprising, therefore, with this definition in his mind, that he says "all miracles are centaurs." There is but one interpretation of a miracle that can at all meet the requirements of discussion, and that is the one employed by the writers who describe them. What they mean in the New Testament, and not what they mean in their primitive signification, is what is desirable to be understood.

There are four words in danger of being confounded in our discussion of the subject.

1. *Θαῦμα*. It is the word for wonder, admiration or surprise. (Xenophon's "Anabasis" vi., 3, 23, where it refers to astonishment

at something unexpected.) In the LXX., Job xvii., 8, it is employed to translate the Hebrew *shamem*, which means to be astonished, amazed. As a noun it is employed but once in the New Testament, Rev. xvii., 6, where it retains its signification of wonder. "I wondered with great wonder" (*θαῦμα*).

2. *Τέρας*. A wonder, portent, prodigy. It is in the LXX. a translation of the Hebrew *mopheth*, which means a miracle, a prodigy. The primary idea is that of something portentous, marvellous, and refers to the future.

3. *Σημεῖον*. Sign, mark, token, something which marks or designates anything, as Romans iv., 11, sign of circumcision. In the LXX. it is the translation of the Hebrew *'oth*.

4. *Δύναμις*.* Ability, power, force.

Θαῦμα is excluded from consideration because it is never employed to designate a miracle in the New Testament. Also *τέρας* cannot be regarded as the characterization of a miracle, because it is always in the New Testament employed in the plural in connection with *σημεῖα*, a few times with *τερατά* first, but commonly with *σημεῖα* preceding it. This connection of *σημεῖα* with it cannot be purely accidental. If the thought of the sacred writers had been merely the idea of the wonderful, they could have made it clear by the employment of *θαῦμα* or *τέρας*, or both. But *θαῦμα* is never employed; *τέρας* is never employed without giving also the impression that the wonder did not exist for itself, but had a distinct object. This twofold characteristic of a miracle—something that had a significance, *σημεῖον*, something that was astonishing, *τέρας*—is not the conception of any one writer, but is woven into the whole nomenclature of the New Testament. Matthew and Mark and Luke and John and Paul all hold to this combination of words. It is not claimed that in every case these words had all the characteristics of a Scripture miracle, but that such is the conception of the New Testament is clear. In II. Thess. ii., 10, the Apostle speaks of the working of Satan "with all powers and signs and lying wonders" (Rev. Version), or in the note, more strictly after the Greek, "power and signs and wonders of falsehood." It thus clearly appears that the three

* See Bloomfield's New Testament Lexicon; also "Lectures on Apologetics," Prof. H. B. Smith, p. 94.

conceptions of the miraculous in the New Testament are power, *δύναμις*, a purpose or mission, *σημεῖον*, and wonderfulness, *τέρας*, something beyond the expectation, viz., something supernatural.

Prof. Huxley's whole theory falls away, because he has given a false definition of a miracle. We may concede with him that if his definition holds, then a miracle is "a centaur" only. To assume that, however, as the full definition is to beg the whole question. The apologists for miracles have always protested against such a definition as that of Prof. Huxley. He is merely fighting a man of straw. He fights with great dexterity and very powerful are his blows, but his foe is only in his own imagination. New Testament miracles were intended to confirm something, not mere exhibitions of supernatural power. In the Epistle to the Hebrews, ii., 4, their general nature is indicated: "God also bearing *witness* with them both by signs and wonders, and by manifold powers, and by gifts of the Holy Ghost, according to His own will." This view of miracles is that of all modern writers on this subject. Prof. Henry B. Smith, in his "Lectures on Apologetics" (p. 94), after referring to the New Testament words, which I have given, adds: "Miracles thus are wonderful phenomena, not explicable by known laws or natural agencies (second causes); the product and evidence of superhuman, divine power; designed to give attestation to a divine revelation." Prof. Mozley ("Eight Lectures on Miracles," p. 21) says: "Does a miracle, regarded as a mere prodigy, or portent, appear to be a mean, rude, petty, and childish thing? Turn away from that untrue because inadequate aspect of it, to that which is indeed the true aspect of a miracle. Look at it as an instrument, as a powerful instrument which has shown and proved its power in the actual result of Christendom."

We may agree then with Prof. Huxley in denying that a miracle is a "violation of the law of nature," but we cannot for a moment countenance his statement that "all miracles are centaurs." A miracle is the introduction of a new force, or rather of the same force that has been in the world from the beginning, for a definite and worthy and necessary end. God who created the universe controls it, and doeth His will "among the armies of Heaven and the inhabitants of the earth." All the

New Testament miracles have a definite purpose. They are demonstrations of the truth of Christianity. They attest the truth of revelation, and the divine mission of Jesus.

This is particularly true of the resurrection of Lazarus and of the resurrection of Christ. They are exhibitions of supernatural power exerted for wise and beneficent ends. Instead of being centaurs, they are in harmony with the aspirations and hopes of humanity. Those who have not believed in the resurrection have hoped for it, and this longing of mankind shows that such attestations of a future life are not abnormal, but are employed for beneficent ends. No mere prodigies are these; no attempts to astonish, as in the case of the thaumaturgists of the world. They are matters of fact and must be demonstrated by evidence, and we join with Prof. Huxley in the belief that the evidence in their support should be very strong and convincing.

Another point in Prof. Huxley's discussion is, his attempt to show the impossibility of proving a *modern* miracle—by implication, all miracles. I emphasize his words “modern miracle,” for it is at this point particularly that the fallacy of his discussion lies. He illustrates his point, as usual, with great force and clearness.

He says: “It is probable few persons, who proclaim their belief in miracles, have considered what would be necessary to justify that belief in the case of a professed modern miracle worker. Suppose, for example, it is affirmed that A. B. died, and that C. D. brought him to life again. Let it be granted that A. B. and C. D. are persons of unimpeachable honor and veracity; that C. D. is the next heir to A. B.'s estate, and therefore had a strong motive for not bringing him to life again; and that all A. B.'s relations, respectable persons who bore him a strong affection, or had otherwise an interest in his being alive, declared that they saw him die. Furthermore let A. B. be seen after his recovery by all his friends and neighbors, and let his and their depositions that he is now alive be taken down before a magistrate of known integrity and acuteness; would all this constitute even presumptive evidence that C. D. had worked a miracle? Unquestionably not, for the most important link in the whole chain of evidence is wanting, and that is the proof that A. B. was really

dead. The evidence of ordinary observers on such a point as this is absolutely worthless. And even medical evidence, unless the physician is a person of unusual knowledge and skill, may have little more value." In other words, it seems impossible to demonstrate fully that one was dead, hence impossible to prove a resurrection. I pass over his illustration of an historical coincidence, as an illustration which certainly does not illustrate, and confine myself to his statement of demands. He asks what would be required of a "modern miracle worker"? When a modern miracle worker appears as a Saviour of men, with a religion to authenticate, we may consider it, but we have only to do with the miracles which were wrought in the New Testament.

We will admit that if such a story as he presents, with all the evidence that he cites, were offered to us, we too should reject it, and demand proofs of the utmost stringency. But a modern miracle and those wrought in the time of Christ are radically different. The latter are largely connected with a person, who claimed attention by His life and teachings as well as by His miracles. His teachings are to-day the highest and purest and best known to humanity. You cannot separate the miracles of Christ from His personality. It is this attempt by what is termed the scientific method, to divorce the facts from the peculiar conditions under which they arose, which has caused so much confusion on this subject. The real question at issue is not what will convince us to-day, but what would and should convince us, if a person who had been predicted and expected for hundreds of years had come in answer to and in correspondence with these expectations, whose very appearance and words excite universal attention, and who wrought such wonderful works openly, and claimed them as the attestations of His mission. We are not contending for prodigies to-day, but for miracles, as they were attested then. Such expectations, connected with such claims, could not fail to receive exhaustive investigation.

The New Testament supplies a test case of the very kind required by Prof. Huxley. Lazarus, the friend of Jesus, had died. Jesus was sent for. He was in no haste to come, asserting that this death was for a purpose—the glory of God. When Jesus came the burial had taken place. He had lain in the grave four

days, and the sisters protested against the possibility of his resurrection. Jesus said, "Lazarus, come forth." He came forth "bound hand and foot with grave clothes," and Jesus said, "Loose him and let him go." "Then many of the Jews which came to Mary and had seen the things which Jesus did believed on Him." If you grant the history, you have a case of death and restoration. Every requirement of criticism is met and the only possible answer is that the narrative is unhistorical. The answer, without proof of the unhistorical character of John's Gospel, again begs the whole question.

Meyer says on this event: "No narrative of the New Testament bears so completely the stamp of being the very opposite of a late invention. . . . And what an incredible height of art in the allegorical construction of history must we ascribe to the composer."

Also Sanday says of the Gospel of John: "The Gospel is like that sacred coat, 'without seam woven from the top throughout'; it is either all real and true or all fictitious and illusory; and the latter alternative is more difficult to accept than the miracle." (See Rev. A. Plummer, D.D., "Commentary on St. John," xl.)

If any theory in explanation of these recorded facts, to place them within the sphere of physical law, were accepted as correct, in order to set aside the plain statement of the Scriptures, the remark of Mozley ("On Miracles," p. 119) would be pertinent and unanswerable: "The reduction of the gospel miracles to physical law would have been indebted for its success, not to and hypothesis of philosophy, but simply to an alteration of the facts, in accordance with a supposed more authentic and historical estimate of them." The conditions of the story of the resurrection of Lazarus afford a strong presumption of its literal accuracy. It bears no marks of invention. It is too circumstantial. No satisfactory explanation of it, such as would satisfy the conditions of scientific certainty has ever been given. The mythical theory of Strauss, and the hallucination theory of Renan, alike fail to give a tolerable explanation, much less a satisfactory account. It is impossible to conceive of a case meeting more fully the condition required by Prof. Huxley, that the person

raised was actually dead, than that which is furnished in the resurrection of Lazarus.

It only remains in our present discussion to notice another of the propositions made by Prof. Huxley, viz.: that if the facts mentioned in the Bible as miraculous were admitted, it would only lead to a revision of our ideas of the laws and forces of nature. His own words, however, will best illustrate his position.

His language is a criticism upon Hume's statement: "It is a miracle that a dead man should come to life; because that has never been observed in any age or country." "That is to say, there is an uniform experience against such an event, and, therefore, if it occurs it is a violation of the laws of nature. Or, to put the argument in its naked absurdity, that which never has happened never can happen, without a violation of the laws of nature. In truth, if a dead man did come to life, the fact would be evidence, not that any law of nature had been violated, but that those laws, even when they express the results of a very long and uniform experience, are necessarily based on incomplete knowledge, and are to be held only as grounds of more or less justifiable expectation."

Such is the language of Prof. Huxley, denying the possibility of the supernatural, by the assumption that all that occurs, however wonderful, must be within the realm of natural laws. This is the boldest begging of the very question at issue. The claim of Christian thinkers that there have been certain events, such as the resurrection of Lazarus and the resurrection of Christ, is based on their belief that a divine element, beyond the ordinary course of nature, intervened to produce them. To say, as Prof. Huxley does, that if these were admitted, it would only show that the course of nature had a range beyond what we had previously assigned to it, is to say that a thing must be so because it had always been so before, which is the real point of discussion.

Let us, however, follow Prof. Huxley: "No one who wishes to keep well within the limits of that which he has a right to assert will affirm that it is impossible that the sun and moon should ever have been made to appear to stand still in the valley of Ajalon; or that the walls of a city should have fallen down at a

trumpet blast; or that water was turned into wine; because such events are contrary to uniform experience and violate laws of nature. For aught he can prove to the contrary, such events may appear in the order of nature to-morrow. But common sense and common honesty alike oblige him to demand from those who would have him believe in the actual occurrence of such events, evidence of a cogency proportionate to their departure from probability; evidence at least as strong as that which the man who says he has seen a centaur is bound to produce, unless he is content to be thought either more than credulous or less than honest." This lengthy quotation is given in order that we may have a full comprehension of his views.

No one will question that "common sense and common honesty alike oblige us to demand in such cases, evidence of a cogency proportionate to their departure from probability." He assumes that should these facts be demonstrated, then it needs that there was an unknown force operating which must be sought, and that that force will be found in the domain of natural law, and not of supernatural power. As there are many things formerly regarded as prodigies, which are now shown to be within the realm of law, so we may assume that these facts, if they be facts, will be found to occupy the same realm and must be accounted for in the same way. This is, perhaps, the most specious of all the modern objections to the miraculous in history. It is an appeal to the current belief in human progress, and yet it is also purely negative. It is the purest assumption. It simply says, here is a phenomenon, the origin of which we do not know, but we shall surely find out. It is the business of philosophy to ascertain the causes of things. If you admit the miraculous, it must also be admitted that modern thought has as yet found no way of explaining them. On the other hand, the Scriptures give not only the facts, but from the beginning have maintained an adequate and consistent explanation of them. They would trace their origin to an invisible force, of which they have no knowledge; we to an invisible God, revealed in the Bible. We affirm that these facts when demonstrated establish the existence of a personal divine factor, and in the absence of

any contradictory proof whatever, the latter is the most rational solution.

There are certain features of a miracle which are inconsistent with their causality being found in the realm of what we ordinarily call nature. One has already been noticed, viz.: that the New Testament miracles are largely connected with the personality of Jesus Christ and cannot be considered apart from Him. Another feature is that they are connected with the exercise of the human will, and are called forth by circumstances which those who perform them regard as fitting occasions, and therefore are destitute of the essential characteristics of ordinary law. The assertion that there is a law, though we do not know it, so far as testimony is concerned, is as unscientific as it is to assume that miracles are the result of supernatural power though we do not see it.

This aspect of the subject is well expressed by Mozley ("On Miracles," p. 118): "But to say that the material fact which takes place *in* a miracle admits of being referred to an unknown natural cause, is not to say that the miracle itself does. A miracle is the material fact *as coinciding* with an express announcement or with express supernatural pretensions in the agent. It is this correspondence of two facts which constitutes a miracle. If a person says to a blind man, 'See,' and he sees, it is not the sudden return of sight alone that we have to account for, but its return at that particular moment. For it is morally impossible that this exact agreement of an event with a command or notification could have been by mere chance, or as we should say, been an extraordinary coincidence, especially if it is repeated in other cases." Also Mansel ("Appendix to Mozley on Miracles," p. 276) observes: "The fact of a work being done by human agency places it, as regards the future progress of science, in a totally different class from mere physical phenomena. . . . In order that natural occurrences, taking place without human agency, may wear the appearance of prodigies, it is necessary that the cause and manner of their production should be *unknown*; and every advance of science from the unknown to the known tends to lessen the number of such prodigies by referring them to natural causes, and increases the probability of a similar explanation of

the remainder. But on the other hand, in order that a man may perform marvellous acts by natural means, it is necessary that the cause and manner of their production should be *known* by the performer; and in this case every fresh advance of science from the unknown diminishes the probability that what is unknown now could have been known in a former age. The effect, therefore, of scientific progress, as regards the scriptural miracles, is gradually to eliminate the hypothesis which refers them to unknown natural causes."

The destruction of the idea of the supernatural is opposed to the general consensus of humanity. The conviction on the part of mankind in general of a Being who made and controls the world, is as deep and as universal as the idea of the uniformity of the order of nature. The existence of the supernatural is engraven on the heart of humanity and cannot be eradicated from it. The affirmation of its non-existence and of the impossibility of proving a miracle by human testimony, is the utmost stretch of irrationality.

If the impossibility of proving a miracle could be demonstrated, it would follow that it would be impossible to prove anything beyond the reach of our personal knowledge.

The belief of the possibility of proving the miraculous was fundamental with the Apostle Paul. This general review of the objections to the miraculous brings us to the consideration of the nature and force of the testimony of the Apostle Paul. No reference has thus far been made to the resurrection of Christ as the proof of the miraculous, as the evidence for that event is the subject of inquiry in connection with Paul's beliefs. He assumes that the resurrection was a historic fact, to be proved as a matter of fact, but with a cogency of proof proportionate to the importance of the subject. He assumes also the death and burial of Christ as well known and admitted. He states also that He rose the third day according to the Scriptures. He unquestionably believed in Christ's resurrection. Let us consider the value of his beliefs to us.

I lay down five canons of evidence which if found as true in any individual case, the testimony must be recognized among men as sufficient to establish any historical fact. They are not

novel, and are such as will meet the natural demands of reliable testimony.

1. The witness must be near enough in time and place to the facts of which he speaks to give accurate testimony concerning them.

Apply this to Paul. He was a contemporary of Jesus Christ. Chronologists, while differing as to the precise year of Paul's birth, are agreed as to the limits within which it occurs. (Chrysostom 2 A.D.; Schrader (Conybeare & Howson) 14 A.D.; Meyer 10-15 A.D.) If we assume 10 A.D. as the date of his birth, he must have been at least twenty years of age when the great events in Christ's ministry were transpiring at Jerusalem. After his early training in Tarsus, his native city, he was sent to Jerusalem to pursue his studies with some celebrated Rabbi, in his case, Gamaliel. He may have been a resident of Jerusalem at the very time when Jerusalem was aroused by the trial and execution of Jesus.

These were the stirring questions of the time in the Jewish Church and indeed in the entire nation, and it is not to be supposed that a thoroughly trained Jew, as Paul was, could fail to be deeply impressed by these events and to investigate thoroughly the conditions out of which they arose.

A note of time is also found in the letter to the Corinthians already referred to, which, according to Dean Stanley, was written about twenty-seven or twenty-eight years after the resurrection occurred. Assuming, as we have a right to do, that he was familiar with what took place at Jerusalem, we have here this further note of his faith about a quarter of a century later. He gives a strong array of proof: "After that He was seen of above five hundred brethren at once; of them the greater part remain until this day, but some are fallen asleep." Here is an appeal to the testimony of his contemporaries, which if not true would have been ridiculous in a formal argument, such as that found in the fifteenth chapter of I. Corinthians, and could have been easily refuted if it had not been a fact. Moreover there is a minuteness about the statements of proof which only could belong to a careful investigator. He shows that he is not merely copying the records of the Evangelists, because he men-

tions witnesses to the resurrection not mentioned by them. His appearance to James is not found in the Gospels, but is not necessarily incorrect; his own investigations or a direct revelation may have been the source of his knowledge. We have thus all the facts to show that without doubt Paul was within the limits of time which not only did not preclude investigation but demanded it. To conceive of Paul, a Hebrew of the Hebrews, a resident for a time at Jerusalem, a man of an analytical and inquiring mind, one familiar with the controversies arising out of the appearance, life and apprehension of Jesus, and yet not investigating the testimony on which his beliefs were based, is a conception impossible to a thoughtful mind.

It is not however attempted here to demonstrate that he did make such an investigation. It is only here shown that he was living within the reach of the facts and could know the truth if he would. This much the time of his appearance clearly proves.

2. That the prejudices of the witness, if any, shall not be in favor of the side for which he gives testimony, and if they be on the contrary side, his evidence is proportionately stronger.

This is so common a maxim that it needs only to be mentioned and applied in the case we are considering. Paul was manifestly the possessor of the prejudices of his race against Jesus of Nazareth. His lowly birth and His spiritual kingdom, were not in accordance with their Messianic expectations. In the crucial hour it was they who cried out, "Not this man but Barabbas. Now Barabbas was a robber." His inheritance of their antagonisms is shown by his first appearance in this history. He was consenting "to the death" of Stephen, the first martyr to the new faith. The trend of his mind was further shown in his offering himself as the willing instrument for the destruction of the infant Church. He was not drafted into the service of the hostile chief priests, he was no half-hearted emissary, but he was a self-chosen antagonist of Christ and His disciples. He went to the high-priest and desired of him letters of authority. The language of the historian on this point is very strong: "And Saul, yet breathing out threatenings and slaughter against the disciples of the Lord, went unto the high-priest, and desired of him letters to Damascus to the synagogues, that if he found any

of this way, whether they were men or women, he might bring them bound unto Jerusalem." (Acts ix., 1, 2.) In the letter to the Galatians he speaks of this part of his history as well-known, "how that beyond measure I persecuted the Church of God and wasted it." (Gal. 1., 13.)

So deep was the impression which his hostility to Christ and His disciples had made upon the infant Church, that they heard the news of his conversion with amazement, and were with difficulty persuaded to receive him as a brother. When, after his conversion, the Lord directed Ananias to visit Paul, Ananias hesitated and said: "Lord, I have heard by many of this man, how much evil he hath done to Thy saints at Jerusalem." (Acts ix., 13.) And it was only by a direct command and assurance from the Lord that he went to Paul and bore the divine message. Straightway Paul began to preach, and all that heard him were amazed and said: "Is not this he that destroyed them which called on this name in Jerusalem, and came hither for that intent, that he might bring them bound unto the chief priests?" (Acts ix., 21.)

Afterwards when he proposed to join himself to the disciples in Jerusalem, "they were all afraid of him and believed not that he was a disciple" (Acts ix., 26), and Barnabas found it necessary to explain the history of his conversion, in order to assure them that he who had been their well-known and dreaded adversary was now their friend and champion. This part of Paul's life ever after filled him with regret.

Paul therefore came to the study of Christianity with the most inveterate and hostile prejudices against its Chief. They were inherited and conscientious: "I verily thought within myself that I ought to do many things contrary to the name of Jesus of Nazareth." Whatever testimony, therefore, Paul offers to the great facts of the Christian religion is the testimony of one by birth, training and action committed to hostility instead of friendship to them.

3. That, if any undue or unusual influence shall appear to have biased or controlled his judgment, he shall have had time afterwards to modify or retract the conclusions reached under that influence. It is admitted that there was a controlling in-

fluence on the mind of Paul which affected his judgment and his conduct on this great question. The occurrence which so wonderfully affected him took place on the way to Damascus, and is recorded in full in the ninth chapter of the Acts. We need not here argue as to the precise nature of that influence, since its solution is not important to our present purpose. He was fully convinced, and that conviction never forsook him, that on that remarkable occasion he had seen the personal, the risen Christ, and had heard His voice. It is a testimony most intensely personal. If it were granted that what Paul saw and heard was lightning and thunder, or that the whole transaction was subjective, it still remains that the effect was among the marvels of all history. One of the most wonderful events in history is the change which thus suddenly came upon Paul, a change so marvellous that no adequate explanation save the literal understanding of the occurrence, as related by himself and recorded by Luke, has been at all regarded as satisfactory. The transformation was complete; the persecutor becomes the advocate, the rigorous Pharisee becomes the loving disciple of Jesus, the emissary of destruction becomes the missionary of salvation by faith in Christ. Reuss says ("History of New Testament," vol. i., p. 54): "The conversion of Paul, if not an absolute miracle after the old theological pattern, is yet a most remarkable psychological problem. In view of these facts, it is, to say the least, precarious to attempt to see in the occurrence nothing but a thunder-storm and an overwrought imagination. On the other hand, no sound theology can be satisfied with the notion of a compulsory, mechanical transformation of a great and noble soul." The mode may be a legitimate subject of discussion; the result is written on every page in the history of the Church from that time until the present. Whatever the nature of the influence, its results have been abiding.

If, however, there was a possibility of his having been mistaken, he will recall it and recant his declarations. He affirms that he had seen the risen Lord, that he called Him by name, that He designated his work. Instead of questioning the accuracy of the revelation, he mentions it at different times, as an apology for his life. He even recalls the exact language of

Christ: "Saul, Saul, why persecutest thou Me?" Anything which lacks a basis of reality after awhile fades from view. Visions, ecstacies, however wonderful their effects for the time, ultimately cease to exert their influence. A few weeks, months, or at most years, and they are either forgotten or cease to be elements of power over men. Great waves of excitement often pass over communities and nations, but unless based on permanent ideas they as speedily pass away. The pendulum carried too far by some abnormal force soon returns too far in the opposite direction. But Paul lived after this event for thirty years, and the memories and influence of that wonderful scene on the way to Damascus never ceased to affect him. The point to which we urge attention is that he held fast this faith for so many years. It is not only possible but morally certain that he believed that he had a vision from Christ in His resurrected state, and this vision was in harmony also with all his other sources of certainty. Nowhere else can you find an example, so far at least as I can recall, of a man swayed by a vision which had no basis in reality, and who remained absolutely controlled by its influence throughout a life which lasted for many years. The only case is that of a man who had lost the normal powers of his mind. Paul's faculties were never more acute than during the period of his subjection to this dominant idea of his divine call on the way to Damascus. This abiding influence of the marvellous event called his conversion is a proof of the reality of the great facts on which it rested. The conception of such a life as his, swayed by an unreality, is an impossible one to human thinking.

4. That the permanence and depth of his beliefs shall be demonstrated by such tests as will leave no doubt as to his integrity in holding them. Suffering for one's beliefs is not a proof of their correctness, but is a proof of the sincerity of the one who holds them. No greater tests have ever been applied to any witness than to the Apostle Paul. The sufferings which he underwent are graphically described by his own pen in I. Cor. xi., 23-30. Every kind of suffering to which human nature may be exposed is found in that narrative, which is largely confirmed by Luke's history, as found in the Acts. There was intense

physical pain, deep anguish of soul, the perils among false brethren, a sense of personal weakness, which was only endurable because of his belief in the presence of divine power with him, his care of all the churches. He kept the faith even within the walls of a prison, whose doors he knew would open only to bring him to death. In his last letter he declared: "Nevertheless for this cause I am not ashamed, for I know whom I have believed." I cannot conceive of any tests of integrity which were not applied to him. Alienation from his race and kindred, the forfeiture of all his natural aspirations and hopes, sufferings such as men are rarely called to undergo, are demonstrations of the integrity of his beliefs.

5. That his natural and acquired powers shall be such as to commend his judgment and his statements to thoughtful men and women. Here we are on ground of the utmost importance. The historic facts which Paul believed have been questioned, but the capacity of the Apostle Paul to judge of the facts has never been successfully assailed, in reality has never been questioned. Reuss says ("History of New Testament," vol. i., p. 134), "Moreover, legend has no need to deck with its tinsel the name of Paul of Tarsus, as it has done with so many other apostolic names. Surely he shines brightly with his own light in the eastern sky of the Church, a preacher of righteousness in both East and West as far as his rays penetrated, until, like the sun, after a nobly completed day's work, he went down in the far distant west. . . . On the contrary, like everything truly great upon earth, his thought was in advance of the age, and in consequence either hated or misunderstood, and comprehended only in its outer expression, not in its inner meaning; was now a living light, now an apple of discord for the wise and prudent of the world." The words of this cautious and often unorthodox critic express the critical estimate of Paul. The bitterest antagonists of his faith have conceded the grandeur and intellectual superiority of the man. In him were combined logic, learning, sublimity and wisdom. The centuries have studied his writings. They stand to-day among the acknowledged masterpieces of the human intellect. If it was known to-day that any man could infallibly interpret them, thousands of students would

gather at the feet of such an one for instruction. The highest reach of modern thought is to interpret what Paul wrote eighteen centuries ago. The eighth chapter of Romans, the thirteenth and the fifteenth of Corinthians have not been surpassed by any writer, ancient or modern. He is acknowledged to have been a man of vast learning, of acute intellect, of resistless logic, of poetic fervor.

No one can question that his judgments are worthy of our consideration. No one can urge with any show of credibility that he accepted fancies for facts, or that he received the doctrines of the New Testament without careful consideration.

6. In addition to this personal testimony of Paul, we have the uncontradicted testimony of those who were eye-witnesses of the great historical facts of gospel history. Luke begins his narrative with a declaration of the carefulness of his investigations. The consistency of the four gospel histories, when considered in the light of the unexpected circumstances which they were called upon to record, is little less than miraculous. It is not so much a wonder that they appear to disagree in some minor points, but that they agree so completely in all that gives historical value to their statements.

We are thus assured of the truth of the great facts of the Gospel on testimony which seems impregnable. If miracles are to be established by testimony, certainly there are no facts of science which furnish testimony that is more reliable.

We are however told that such testimony is good enough for a believer, but it will not answer the demands of modern historical criticism. One of the latest expositions of the demands of agnostic or materialistic thought is seen in the "Life of Hume," by Prof. Huxley. Let us return to it for a moment and apply it. In the chapter, "On the Order of Nature—Miracles," Mr. Huxley asks : "But are there any miracles on record, the evidence for which fulfils the plain and simple requirements alike of elementary morality ?" Hume answers this question without the smallest hesitation and with all the authority of a historical specialist. "There is not to be found in all history, any miracle attested by a sufficient number of men, of such unquestioned goodness, education and learning as to secure us against all delusion in

themselves; of such undoubted integrity as to place them beyond all suspicion of any design to deceive others; of such credit and reputation in the eyes of mankind as to have a great deal to lose in case of their being detected in any falsehood; and at the same time attesting facts performed in such a public manner, and in so celebrated a part of the world, as to render the detection unavoidable; all which circumstances are requisite to give us a full assurance of the testimony of men."

On this demand for testimony by Hume Prof. Huxley remarks: "These are grave assertions, but they are least likely to be challenged by those who have made it their business to weigh evidence and to give their decision under a due sense of the moral responsibility which they incur in so doing."

It is not the purpose of Christian apologists to underestimate the evidence required for the miraculous. On the contrary they demand, both for their own comfort and for the cause of truth, that the testimony in favor of the supernatural shall be impregnable. It is just because these rigid requirements of historical criticism have been met that they claim a verdict in their favor. It is found in the case of Paul alone. He meets in his own person all possible demands upon individual testimony.

1. He was a man of such unquestioned goodness, education and learning as to secure us against all delusion in respect to him.

2. He had "such undoubted integrity" that there can be no "suspicion of any design to deceive others."

3. He certainly had "such credit and reputation in the eyes of mankind as to have a great deal to lose in case of being detected in any falsehood."

4. The transaction took place in a part of the world and under circumstances such as to render detection unavoidable, if not in accordance with truth. The witness is therefore a credible one.

One point, however, remains to meet fully the demand of Hume, viz., a sufficient number of men who were present witnesses. It has been already stated that Paul appeals in the matter of the resurrection to a number of witnesses, and treats the occurrence as a matter of fact to be proved by testimony,

and also specially affirms His appearance to more than five hundred brethren at once, most of whom remained until the time when he wrote; and further he declares that He appeared last of all to him also. The Evangelists, moreover, state the great facts individually and with such variations as to prove their independence as witnesses. We are therefore brought to the conclusion, that Paul's beliefs constitute essentially an answer to all the requirements of the acute and hostile critic, Joseph Hume. Certain it is that Paul had more opportunities to know the truth than any one since his time; certain it is that no modern writer has been more interested in finding out the truth or more disinterested in its search; certain it is that not even Mr. Hume or Prof. Huxley can claim greater powers of discrimination or more accurate judgment; certain it is that if his testimony is not valid, then valid testimony is inconceivable and impossible. If these fundamental facts are not proved, nothing can be satisfactorily proved.

The verdict of such a man as Paul that it was capable of proof, the faith of Paul that it was a fact, the consensus of the wisest and best minds of the world that it has been proved, furnish at least as strong a presumption in favor of the truth of the cardinal doctrines, the incarnation, death and resurrection of Christ, as the declarations of modern scientific thought against it. For it must always be borne in mind, that the contrary to these facts has never been demonstrated and that the only weapon of the adversaries of the faith, is in the region of possibility of proof and not of demonstration. The statement of Paul from his prison in Rome, "I know whom I have believed," still stands unshaken, and so far as any demonstration to the contrary is concerned, it must continue to represent the abiding faith of the Church of God.

EVIDENCES OF DESIGN, DRAWN CHIEFLY FROM ANATOMY AND PHYSIOLOGY

[A Paper read before the American Institute of
Christian Philosophy, March 4th, 1886.]

BY ANDREW H. SMITH, M.D., NEW YORK CITY.

THREE months ago a paper was read before the Institute by the Rev. Henry A. Dows, on "The Witness of the Conscience to God." In the discussion which followed I made some remarks which I have been asked to add to and put into the form of a paper. This I have done, and I trust that those of you who were present on that occasion will pardon the repetition of some of the points then brought forward.

Except, perhaps, in those cases in which the Christian life is the outgrowth of a Christian education beginning in childhood, it seems evident that the *intellect* must be convinced of the existence of a God before the individual can accept the idea of a revelation from God. I say the intellect must be convinced, because at this stage the affections are not yet enlisted, and the intellect is the sole tribunal before which the question can be tried. If we trace any form of religion back to its origin, it will be found, as I believe, not in an impulse or instinct of the human mind to cling to something higher than itself, as has been alleged, but in the necessity felt by the intellect to account for the phenomena of nature. This necessity can be supplied only by the assumption of the existence of a creative power, and according to the notion formed of that power will be the particular form of religion. Up to this point the process has been a purely intellectual one, but when once the conception of a Supreme Being has taken shape, the emotions go out toward it, and love, fear, reverence and other attributes of the affections come into play. The abstract *cause* to be examined and reasoned about has become the concrete *deity* to be worshipped.

Christianity in common with other forms of religion must

pass through this stage of development in relation to the individual, and therefore the arguments that prove the existence of a God must come before those that prove the genuineness of revelation.

The arguments in this direction are derived from many sources and are familiar to all present. I shall speak of but one, viz., the evidence of design in nature, the intelligent adaptation of means to the attainment of results. Such an adaptation on a larger scale and in greater variety than could be explained by mere coincidence, must be accepted as the work of an intelligence sufficiently wise to conceive the plan and sufficiently powerful to put it into execution. And such an intelligence subjecting all nature to its control, and therefore superior to nature, supplies the fundamental conception of God.

All this appears so self-evident that it would seem that no argument was required in its support; and yet by a strange process of mental jugglery modern scepticism would endeavor to supplant an intelligent First Cause by a system of unintelligent or *natural* forces, the origin of which forces it does not attempt to explain. It exalts the instrument into the place of the user, as if the house were built by the saw and the hammer, and not by the carpenter; and by an inversion of reasoning the sceptic calls upon science to aid him in his argument. While each new discovery but adds a new illustration of the harmony of design, it is held up as a new proof that all things are the result of chance.

The tendency to this mode of reasoning, which is now so especially prominent, makes it worth while to repeat the arguments against it, and though I can say nothing which has not been said many times before, yet there are certain considerations drawn from organic life which have interested me peculiarly and to which I will briefly advert.

An individual belonging to the higher forms of animal life is the most perfect machine which it is possible for the imagination to compass. In its construction nearly every principle in physical science is illustrated. It was not until science had reached a considerable degree of development that the laws of refraction of light were discovered. But no sooner were they known than

it was obvious that what it had taken the human mind centuries to evolve had all those centuries been practically applied in the construction of the eye. Almost within the memory of some here present, laborious research and ingenious experimentation succeeded in establishing the laws governing the diffusion of gases, but only to find that ever since lungs began to breathe and blood to circulate, these laws had dictated the structure of the respiratory and circulating organs. It seems only yesterday that the law of osmosis was announced as a brilliant discovery, yet modern physiology shows that the entire *scheme of nutrition* is based upon this law, which regulates the movement of fluids of different densities through membranous tissues placed between them. The radiation and conduction of heat are subject to laws which have been formulated only in modern times, yet the first warm-blooded animal created was constructed in conformity with them. And so I might go on almost indefinitely, showing that the human mind in its farthest reaches has only succeeded in discovering what had been discovered and utilized ages before. Judging of the future by the past we may confidently predict that if any new principle or law shall be discovered in physical science, it will be found to have been already recognized and applied in the structure of the higher organisms.

While thus it is evident that there was an intelligence by which what man has discovered was known and utilized before man existed, there is also abounding evidence of careful and exact plans for bringing about definite proposed results. For an example drawn from biology; the *object* proposed is the distribution of nourishment to every portion of the body, and the removal from every portion of the body of effete and worn-out material. The *means* employed embrace an elaborate system of organs by which food received from without is reduced to the fluid known as blood, which blood is conveyed through vessels dividing and subdividing into millions of tiny branches which permeate the remotest structures, conveying to them the nutriment which they require and receiving in return the products of waste and decay. The blood is then returned by another set of vessels to the lungs, where the waste matter is thrown off into the air, and the purified blood again begins its round.

In the course of the circulation thus briefly sketched there are required a great variety of mechanical devices for overcoming special difficulties. Many of these are most wonderful in the efficiency of their action and the ingenuity (if I may reverently use the term) of their construction. To begin with, the propulsion of the blood through such minute channels, requires a tremendous force. This is supplied by the central organ, the heart, the sum of whose energy is equal to lifting over fifty pounds with each pulsation and there are on an average about seventy pulsations each minute. There are practically two hearts placed side by side and contained in a common envelope—the right, which receives the impure blood and propels it through the lungs, and the left, which receives the purified blood from the lungs and forces it through the whole system. Each ventricle is a hollow muscle which, when relaxed, receives the blood into its cavity, and when fully distended, contracts upon the blood and drives it forward. But the blood must pass out by a different orifice from that by which it entered, and this requires a valve at the orifice of entrance to prevent a backward current. Now a valve having a rigid bony framework would interfere with the expansion and contraction of the ventricle. The valve is therefore composed on the left side of two, and on the right side of three thin, membranous, pliable flaps, which are easily separated by the inward current of blood flowing between them, but which swing together and close the orifice the moment the ventricle contracts. But the natural tendency of these thin, soft curtains would be to turn inside out with the pressure of the blood behind them, and to flap backward and forward with each change of the direction of the current. To prevent this a number of fine inelastic cords are attached by one end to the edges of the curtain, and by the other to the wall of the ventricle. But this provision would not be sufficient if it stopped here, for as the ventricle contracted, the two ends of these cords would be brought nearer to each other, and the cords would be slackened just when they ought to be tense. To meet this difficulty the cords are not attached directly to the walls of the ventricle, but to the tips of little muscular cones which project from the walls. As the *walls* contract these *cones* contract, and the

tip of each cone is pulled back just as much as its base is pushed forward. Thus the point at which the cord is attached remains stationary, and the cord maintains its tension, although the cavity across which it is stretched is greatly reduced in size.

Truly chance is an accomplished mechanician!

But in following the course of the circulation other remarkable provisions are encountered. The brain demands a large amount of blood to carry on its ceaseless work. The supply comes from the heart by a very short and direct route. But the force of the heart's contraction is so great that if the vessels led to the brain in a perfectly straight course, a severe shock would be communicated to this very delicate organ with every pulsation of the ventricle. To obviate this each of the main arteries, at one point in its course, bends abruptly at a right angle, runs in a horizontal direction for about half an inch, and then bends again at a right angle and proceeds upward in its course to the brain. The effect of this jog in the course of the vessel is to partly arrest each wave of blood before it reaches the brain, and thus the walls of the vessels receive the shock which the brain escapes. But such a continuous hammering would be more than the unsupported walls of the vessel could endure, and so the bend is made to occur just at the base of the skull, and the horizontal portion of the vessel together with both the angles is neatly lodged in a little case of bone.

A further study of the vessels shows that the veins in which the current flows in an upward direction, that is, against gravity, are supplied with numerous valves at short distances from each other, which help to sustain the weight of the column of blood. But those veins in which the current habitually flows in a downward course have no valves.

Whoever has watched the fingers of the musician flying over the keys, each one of the ten doing its own special work with unerring accuracy and lightning-like rapidity, and yet all working together in perfect harmony, must have admired the wonderful skill which planned the human hand. It is probably the most perfect mechanical device of which we have any knowledge. No machine ever invented by human skill has approached it in the variety, complexity and precision of its move-

ments. This is true of the unskilled hand, but when its powers are developed by training there seems to be almost no limit to the dexterity to which it may attain. Witness the wonderful feats of the prestidigitator performed so deftly and so quickly that the eye straining to detect them is completely baffled. The surgeon in some of his operations, especially those upon the eye, must cut almost literally to a hair's breadth or his operation will be a failure. Some kinds of mechanical work require such delicacy and accuracy of manipulation that the best unaided sight is not acute enough to guide the fingers, and the aid of strong lenses must be employed. It is true that machines are made that operate more rapidly and more accurately than the most skilful hand, but they can do only one thing, can execute only one movement, while the number of different movements of which the hand is capable is beyond computation.

There are in the hand, not including the wrist, twenty-one joints, requiring muscles to move them. Now how are these muscles to be placed so as to make the hand most effective for the purposes for which it is designed? As a rule, to which there are very few exceptions, the muscles of the body are in immediate proximity to the joints upon which they are to act. Suppose this rule were followed out in the case before us. The fingers are required to exert great strength. They therefore require large masses of muscle to act upon them. Suppose this muscle was placed in the fingers themselves, in the spaces between the joints, after the general plan observed elsewhere in the body. The fingers would be strong, no doubt, but each would have half the thickness of the wrist, and would yield but clumsy obedience to the will. Such a hand might wield the sword or grasp the hammer of the smith, but it would never serve the purposes of the musician, or respond to the inspiration of the artist.

But Nature found a way of giving the requisite strength and yet preserving to each finger the slender and graceful proportions so necessary for its special office. Abandoning her general rule she adopts a special plan for this special object, and places the muscles at a distance in the forearm, connecting each one by means of a slender tendon with the joint which it is required to move. And lest these tendons should become displaced in the

various positions which the fingers assume, they are made to pass through the arches of tiny bridges thrown across them at short intervals. Finally to insure smoothness of action she throws a strong sheath around each tendon, from the inner surface of which a glairy fluid like the white of egg is constantly secreted, which lubricates the polished surface of tendon and sheath, and effectually does away with friction. What would the machinist not give if he could imitate this arrangement for the piston-rod of his engine?

But still the hand is not complete, for it has other things to do in addition to its functions as a mechanical agent. The fingers are the principal seat of the sense of touch, and besides giving information as to the smoothness, hardness and temperature of bodies, they have often to serve as eyes in places inaccessible to sight. The skin with which they are covered has, therefore, imbedded in its substance minute bodies, called tactile corpuscles about one five-hundredth of an inch in diameter, which are endowed with the peculiar power of receiving the impressions which constitute the sense of touch. On the palmer aspect of the index finger there are about 250,000 to the square inch of surface, and each one is the termination of a nerve filament leading to the brain.

But with all the power of varied movement possessed by the fingers, and all the sensitiveness of their nerves, there are certain things which they are required to do which demand still another provision. The yielding surface of the skin at the ends of the fingers is not adapted to seizing and holding very minute objects. For this purpose there must be a harder substance presenting a thin edge, and the arrangement must be such that two such edges can approach each other and compress the object between them. To meet this requirement each finger terminates in a nail. The nails are hard enough to hold firmly any small object which is grasped by them. But to grasp anything so minute it is important to have the aid of the sense of touch. Now the nail is not sensitive—it contains no tactile corpuscles; but to make up for this, the matrix in and upon which it lies is extremely sensitive. Hence it follows that in the contact of the nail with a hard substance an impression is conveyed

through the nail to the matrix, just as we are enabled to feel inequalities in the pavement by means of a walking-stick held in the hand.

I might adduce many more illustrations from mere anatomical structure, but it is, if possible, more interesting to trace the evidence of creative design in the various *processes of life*. I can merely advert to a few of these, as the subject is as vast as the science of physiology itself. It is moreover one of great intricacy, for the natural laws which elsewhere are undeviating in their action are here in many respects entirely subverted. For example, the chemical affinities, which throughout the whole realm of inorganic nature have reduced the composition of matter to mathematical formulas, are in organic structures absolutely disregarded; so that we see the chemical wolf dwelling with the chemical lamb, and the leopard lying down with the kid.

The principle of life, that which distinguishes living matter from dead matter, is something utterly indefinable, utterly incomprehensible. We are apt to associate it in our minds only with complex organisms, those having brain, nerves, muscles, or in the case of plants, roots, stems, leaves, etc. But it is also a property of elementary protoplasm, which as seen under the microscope is simply a jelly-like substance without form or structure. Masses of this may separate into numerous particles, each of which will still live and move, and these particles may again coalesce, and again be separated, retaining the power of moving and of changing form. And not only so, this shapeless mass without arms or legs, without mouth or stomach, is a beast of prey, seizing and devouring any hapless animalcule which may come in contact with it. Observe under the microscope a small bit of the ooze adhering to the lead, as it comes up from the bottom of the mid-Atlantic. You will see tiny masses of protoplasm, moners, as they are called, having no regular shape, constantly in motion, constantly changing form, sending out projections first on one side then on the other, these projections meeting and joining and enclosing open spaces like an irregular net-work, portions becoming detached and starting an independent existence, or reuniting after a while with the original mass or some other, and all apparently without any other purpose

then the display of ceaseless activity. But in the drop of sea-water in which all this is going on there are other organisms. Here is one enclosed in a tiny shell—a diatome. It swims about until it comes in contact with some part of the moner. Instantly the mass of jelly closes about it, and you can see it held for a while in the midst of its transparent envelope, which is for a moment quiet. Then motion is resumed, and the diatome is pushed toward the circumference of the mass and ultimately cast out. But it is a living thing no longer. Nothing remains but the shell. The nutritious portion has been dissolved and transformed into the substance of the captor.

Now all this will go on indefinitely so long as the vitality of the moner continues. But the moment the vital principle is withdrawn all movement ceases, decomposition takes place and the substance disappears, resolved into the chemical elements out of which it was formed.

Now what is this principle which gives the power of motion to that which has no brain to will and no muscle to contract? which, so far as the most powerful microscope can show, is a mere formless mass of homogeneous matter, without a trace of organization, and without distinction of parts? So far as we can discover, this protoplasm is the ultimate seat of life, the primary union of matter and spirit, of the material with the immaterial. What is added to the mere combination of chemical molecules to make it live, and what is taken from it when its life ceases? The materialist evades the question by saying that it lies in the region of the unknowable; the believer meets the question with the answer that it is a continuation of the original divine creative energy.

Let us go a step further. The lower animals and even man himself, are actuated by certain impulses which we call instinct. These impulses differ from the operations of reason in that they are most active precisely where reason is most deficient, and that unlike reason they are developed at once in their fullest activity. So that while reason attains its growth by slow and gradual steps, instinct is born full-grown. A bird hatched in a cage, and that has never seen a nest, will, if liberated, build its first one as quickly and as perfectly as after years of experience,

and will build it too after a certain pattern that distinguishes the nests of all its species. The beast of prey entraps its first victim as cleverly as if taught by a long succession of failures and successes. The squirrel which has never seen a winter lays up a hoard proportioned to the rigor of the climate in which he lives. And yet these acts will be performed when the slightest exercise of *reason* would show them to be unnecessary and futile. The dog travelling a long journey with his master will bury bones along the roadside, though a tithe of the sagacity which he displays in other things would show him that he would never pass again that way. The captive beaver will weave the straw of his bed between the bars of his cage, and give himself infinite labor to build an illusory dam across an imaginary river. The hen in the midst of a pile of wheat will scratch as diligently for each grain which she picks up as if she were searching out a dozen grains in a bushel of chaff. From all this it is evident that these acts are not the result of a process of thought but of a blind impulse, something which the animal does not control, but by which he is controlled; something that does not originate within him, but that acts upon him from without. Whence comes this something, and what is its object? It comes from the same source as the life of the protoplasm; it is but the operation of the Divine Energy working to preserve the life which it originally infused.

The care with which the life once given is guarded and protected is capable of many illustrations. Let one of you, unaccustomed to manual labor, come with me to a gymnasium and exercise for a short time upon the trapeze. In a few minutes you will be rubbing your hands, and on examining the palms you will find them hot and red. Has it ever occurred to you that this heat and redness are the beginning of a process that alone renders the whole structure of civilization possible—a process without which the race could never have emerged from barbarism? Your hands are soft and tender, and therefore the rude friction to which they have been exposed has irritated them. If they were to remain thus tender, and you were to go on using them in this way, the palm would become in a few hours a great, open, bleeding wound; and complete disability

would be the consequence. But the heat and redness you observe are the result of an increased afflux of blood, brought about by a dilatation of the cutaneous vessels, and this increased supply of blood brings an increased supply of nutritive material. This material is deposited in the meshes of the skin in the form of a horny substance, which increases more and more until it forms a dense resisting layer which effectually protects from injury the softer structures which lie beneath. The hand is now fitted to be the instrument of labor, and by manual labor alone the triumphs of civilization are achieved. Show me a race that does not labor, and I will show you a race of savages. So then, the hard hand of the toiler is at once the badge of a higher development of the race, and a token of the loving care with which the Creator provides for the maintenance of His creatures.

The mechanism by which the body is kept at a uniform heat under great variations of external temperature is exceedingly interesting. This mechanism is so perfect that it is possible to support for a short time, without injury, a temperature above the boiling point of water. I have myself been for several minutes in a room where the thermometer stood 225° F. It was necessary to stand on a thick woolen rug, and to avoid touching any solid substance. Laying the hand on the door-knob would instantly have caused a blister. And yet the heat, though uncomfortable, was not distressing. The explanation is found in the profuse flow of perspiration, which evaporating rapidly cools the surface of the body so that it does not rise in temperature beyond a few degrees. This provision is called into requisition whenever the temperature is very high. But for less degrees of elevation, or rather for variations in either direction from the normal limit of bodily heat, it suffices simply to increase or diminish the amount of blood which is brought to the surface of the body and exposed to the cooling influence of the atmosphere. This is affected by an increase or diminution in the diameter of the cutaneous blood-vessels, brought about by the action of the circular muscular fibres imbedded in their walls. These fibres in their turn are stimulated to action by nervous impressions received at the surface of the skin, carried to the nerve-centres and returned to the muscular fibres as motor im-

pulses. If, for example, the body is becoming too warm, an impression is sent along the nerves to the central nerve ganglia, from which an impulse goes to the muscular coat of the vessels of the skin. In obedience to this impulse the fibres relax, the vessel dilates, and an increased amount of blood is distributed in the superficial structures. This blood is cooled by the action of the atmosphere, and then returned by the veins to the interior of the body, while a fresh supply of warm blood is sent from the interior to the surface. Thus the process continues until the temperature of the whole mass of the blood is reduced to the normal standard.

On the other hand, if the body is becoming too cool, the cutaneous vessels contract, and the blood being confined chiefly to the interior of the body, where the production of heat is most active, its temperature speedily rises. All this is done automatically, without the consciousness of the individual, and a suspension of this regulating action of the vasomotor nerves, even for a brief period, would seriously affect the health, or even destroy life. A mechanism somewhat similar to that I have just described is employed to distribute a due supply of blood to the different organs in proportion to their activity at the moment. For it is a rule without an exception that an increased amount of blood is sent to any organ of which increased duty is demanded. Under circumstances of great mental activity the brain receives a much larger supply of blood than when comparatively at rest, and this is accompanied by a rise of temperature sufficiently great to be measured with a thermometer applied to the scalp. Indeed it is not unlikely that something may yet be accomplished toward localizing the different faculties in the brain by calling them one after another into extreme activity, and then noting for each the point at which the greatest surface heat is found.

During digestion the stomach and liver are congested, and while food is being taken the vessels of the salivary glands are distended. Under the influence of appropriate emotions the tear-glands receive an increased blood supply. When a muscle is exercised beyond its usual activity, the vessels leading to it increase in size. In these and in many more examples which might be adduced the increased supply of blood is the re-

sult of dilatation of the vessels brought about by the action of vasomotor nerves. It would seem as if there must be a central intelligence sending out orders along the different nerves, as the man in the lookout at a great railway station moves the levers that open and close the numerous switches for the incoming and outgoing trains. But it is not the intelligence of the individual. He does not know what is going on in his own body, and could not control it if he did. Yet it is all done for a purpose, and it accomplishes the purpose for which it is done. Purpose implies the exercise of will. Whose will is it, since it is not the will of the individual? There can be but one answer—it is the will of the Creator, the continued echo and reverberation of the original, Let there be! At that fiat sprang into existence the molecule immeasurable for its minuteness, and the universe immeasurable for its extent. As time is not with the Eternal, so His utterances know not its limitations. His creative word once spoken needs no repetition. It is a continuous power until it shall please Him to recall it. Till then it will go on as the motion of protoplasm, as the energy of the nerve-cell, as the contractility of muscle, as the impulse of instinct—in a word, as the principle of life.

To say that even the very lowest forms of life, not to speak of its higher forms, still less of volition and consciousness, can be fully explained on physical principle alone—that is, by the mere relative motions and interactions of portions of inanimate matter, however refined and sublimated—is simply unscientific. There is absolutely nothing known in physical science which can lend the slightest support to such an idea.—*Dr. Lorimer, "Isms," p. 92.*

EMBRYOLOGY.

BY JUDGE WM. ARCHER COCKE, FLORIDA.

[Extract of Letter to the Editor.]

FOR many centuries, from Aristotle down to 1651, in the days of Dr. Wm. Harvey, there were recognized three different modes of generation among animals, *Oviparous*, *Viviparous* and *Spontaneous*. The oviparous and viviparous were discovered by Harvey to be similar, to the extent that viviparous involved the oviparous. Science shows that man has a separate and distinct embryology from every other animal, in the manner and form of the development of the *umbilicus*. In the human embryo, the *amnion*, an enclosing sac around the foetus, is formed as in other animals. In the human the *chorion*—the external membrane of the *foetus in utero*—the same thing in the human species as the *allantois*, a membrane of the foetus peculiar to lower animals, except that its cavity is obliterated by the adhesion of its walls.

The formation, development and uses of the umbilical cord in the human, and its final separation, as the foetus is expelled, are different in the human from any other class of animals; nor can its use and growth be substituted by any combination of the *chorion* and *allantois*, in the human, nor could it supply their places in any other animal. This being physiologically true, it is apparent that in no form, nor action, nor in its development could the *umbilicus* be used in the formation of any cross of animals upon the human; nor could the *chorion* or *allantois* be modified into any agent supplying the place of the *umbilicus*. Conception, embryonic action and foetal development have peculiar forms of action—natural animal action—as to prevent conception, foetal vitality and parturition by any combined effort at conception which must occur before there could be any cross on the human with any other animal, or any cross that could exist between any animal of a different species; or of varieties that could be reproductive.

If man, in his present form of growth and conception from

embryo to parturition, had descended from any other animal, as a physiological fact, some similarity of conception and process of foetal formation would be presented. The differences are so marked that they show an impossibility of any connection between man and the lower animals that could be productive of conception or foetal development.

The well-known distinctions in embryonic formation and action of the *amnion* and *allantois* in different animals show a different formation and action in various species, having such organic developments that will not only forbid crossing of different species, but proves to the anatomist that the changes in their different functions, as applied to their respective action from the exact one producing the foetus by its peculiar and distinct embryonic action, is impossible. This is known to be true in the formation and development, uses and purposes of the umbilical cord in the human, which is unlike, in its formation, development and action, as well as the navel connection with the foetus, any other animal known to natural history.

I make no allusion to the laws of hybridity; to the physiologist it is known that they are not in conflict with any view expressed above, but sustain my position and statement of natural laws on this subject in every respect.

This is sufficient to satisfy the scientific man of the absurdity as well as the infidelity of that view of evolution which has induced many sceptics to use it as an argument against the truth of the Bible and the Christian belief of the origin of the human race, and that man is traceable in his descent from some lower order of animals.

By science I understand all knowledge which rests upon evidence and reasoning of a like character to that which claims our assent to ordinary scientific propositions, and if any one is able to make good the assertion that his theology rests upon valid evidence and sound reasoning, then it appears to me that such theology must take its place as a part of science.—*Huxley, quoted by Bixby, "Physical and Religious Knowledge," p. 218.*

MEMORABILIA.

MOSES.—Rev. R. L. Patterson, the author of a book of extraordinary force and value on the “Errors of Evolution,” speaking of Moses, says: “A writer of that ancient date who could distinguish between the presence of light and the presence of the sun; who could relegate the first appearance of the sun, as an influence on the earth, to a period coinciding with that of the appearance of the season-ring in planets; who could place man as the last product of creation, separating him and his own will altogether from any share in the production of inferior animals, and allotting to him so exactly the place which he fills, and the lordship which he holds; who could distinctly enunciate the fact of the present Sabbath of creation, the fact that, since the appearance of man upon the earth, no further act of creation has been wrought upon its surface, must, even common sense allows it, have received his revelation of the Creator’s purpose (whether by vision, or in allegory, or by direct dictation, except as a matter of curiosity, concerns us not) from some external source to which the secrets of creation and the mysterious processes of life were clearly and intimately known.”*

DR. G. F. PENTECOST gives the following illustration of the way in which the half-educated and the young are led astray by the crude and unproved theories of the so-called scientists of the infidel class: “Not long ago I found a lad of fourteen in an inquiry room. I spoke to him and found, to my surprise, a degree of cold indifference to the subject of religion not often found in the young. He had come in with a school-fellow friend of his, who wanted to speak with me. He avowed himself as being a disbeliever in the Bible. Amazed at this infidelity in one so young, I asked him on what grounds he disbelieved the Bible. He replied, without a moment’s hesitation, that ‘the scientific difficulties in the book of Genesis made it impossible to believe that the Bible was true.’ Probing the infidelity of this lad of

* “Essays on Questions of the Day,” Longman, London, 1866.

fourteen, I found that his teacher in the public school where he attended was a disciple of Herbert Spencer, and that he had managed to instil his scepticism into the minds of his pupils. Moreover, the lad had an elder brother in the Scientific School at Yale College, and he alleged the opinions of one of the leading professors of that school, who was an atheist. In addition, I found that the boy backed up his infidelity by naming a large number of prominent educators of the youth of our land as being among those who did not believe in the divine authority of the Bible. He evidently had been filled by his teacher. We hope that such cases are rare among teachers and pupils; but we fear at the same time that they are not so exceptional as we could wish. Thus does this kind of infidelity silently percolate from the higher down through the lower and younger classes." We fear our common schools are largely used as propaganda of infidelity. If a teacher undertakes to instruct his scholars in the Christian faith he may expect to lose his place on discovery; but is not any teacher quite secure in instilling any kind of anti-Christian falsehood into his scholars?

THE AGE OF THE PLANET.—Mr. T. Mellard Reade, of Liverpool, has contributed to a recent number of the *Geological Magazine* a paper of much interest on the age of this planet. It resolves itself into a criticism of Sir William Thompson's famous estimate of the world's antiquity. Starting on the assumption that the earth was at one moment in a state of uniform incandescence estimated at $7,000^{\circ}$ F. above our present surface-temperature, it was estimated that probably not more than one hundred millions of years have passed since the surface became habitable. In the present essay Mr. Reade seeks to show "on what an insecure basis this tremendous superstructure of inference has been built." In the first place there are insuperable difficulties in the way of determining the average thermal conductivity of the materials of which the earth is composed; and this determination is an indispensable element in the problem. The crust is largely made up of strata varying in thickness and in conductivity, and the laminations would probably favor the retention of heat. On the whole, Mr. Reade believes that the

coefficient of thermal conductivity used in the solution is too high. The result is further vitiated by our ignorance of the rate at which temperature increases downwards. Sir W. Thomson assumed as a rough mean $\frac{1}{50}$ of a degree Fahrenheit for every foot of descent, but this is an assumption to which the writer decidedly objects. If these data are incorrect the calculations based upon them will of course need modification. The data at our disposal are, in fact, so meagre that it is well-nigh hopeless to look at present for any trustworthy results from these calculations. Interesting and ingenious as such speculations unquestionably are, they are not to be received by the geologist without suspicion. Mr. Reade has, therefore, done well to throw himself between the geologist and the mathematician, and show the one how far in this matter he may lean upon the other.

ABOUT BOOKS.

[In this department we shall make mention of recent publications, especially those in the line of our studies. There will not be space for extended review. The name of the book, its publisher, and its price when known, together with a brief statement of its drift will probably meet the demands of our readers. Any book mentioned will be sent post-paid, on receipt of price, by WILBUR B. KETCHAM, 71 Bible House, New York.]

“THE LOGIC OF INTROSPECTION; or, Method in Mental Science,” by J. B. Wentworth, D.D. (Phillips & Hunt. \$2.) This is one of the most important contributions lately made to mental science, and deserves to be read by all thinkers. One great merit of the book is its clearness; no one who knows the meaning of the words usually employed in this department will have the slightest difficulty in understanding what Dr. Wentworth means, whether he accept his meaning or not. Insisting upon the importance of right *method* in psychologic pursuits, the author proceeds to show that the usually accredited method by induction is not only *not* the true method, but that it is quite a false method for pursuing psychologic studies. He does not disparage the inductive method, but greatly appreciates it as the true method to be followed in physical research, for which, and for which alone, it was intended by Bacon, who wrought out his system wholly in the

interest of physical science. The author then points out the evil effects of the attempts to apply the inductive method to mental science, tracing to this the materialism of Hobbes and Hartley, the scepticism of Hume, modern Sensationalism, Positivism and other evil effects. He insists that all these evils have come from attempts to employ a method suited only to physical facts, such things as we have knowledge of by our senses, and not at all to psychical facts, which are essentially different. That they are only attempts he holds because no idealist has as yet succeeded in furnishing us with a genuine example of the application of the rule of the Inductive Method to the facts of consciousness. In the positive portion of his book, Dr. Wentworth endeavors to show that the various ends of the psychical philosophy are reached not by inductive but by intuitional processes. A little less warmth in the controversial portions of this very able book, we venture to suggest, would add to its value.

"HAND-BOOK OF LOGIC," by John J. Tigert, A.M., Professor in Vanderbilt University, is a concise body of logical doctrine, including modern additions, with numerous practical exercises. The writer is comparatively a young man, but this book shows great ability to collect, combine and present the learning of his subject in a way to render it interesting to the general reader, while his matter is so placed as to make the volume an excellent book for the class-room. Indeed, it has been subjected to that test by its author, and, as we learn, by other teachers. It is already received as a text-book in several of our colleges. It is full without being redundant and concise without being either defective or obscure. We commend it to the attention of teachers. (Southern Methodist Pub. House. \$1.25.)

"THEISM AND EVOLUTION" is by Joseph S. Van Dyke, D.D., with an Introduction by A. A. Hodge, D.D., LL.D. (Armstrong & Son. \$1.50.) This is a good book. It makes no war on the Evolution hypothesis, but deals its blows at those unscientific forms of atheism which strive to present the appearance of science by fighting under the banner of some form of Evolution. Our objection to this writer, as to many of our friends, is that "evolution" is sometimes used by him as meaning the same as "de-

velopment." "Theistic evolution" is a contradiction in terms, if we are to accept the definitions given of evolution by acknowledged evolutionists such as Spencer, Huxley, Haeckel, etc. Terminal Development satisfies science and allows God. Evolution excludes God. We insist that our treatises shall observe this distinction, and believe that until our contention on this subject be allowed, we shall find friends hitting friends in the dark. Dr. Van Dyke insists that *wherever* there is evolution it is directed by God. But evolution is everywhere and excludes God. This very excellent book, which we heartily commend as good reading, would have been improved, if this distinction had been observed.

"THE SIMPLICITY THAT IS IN CHRIST" is the title given to a volume of his sermons by Dr. Leonard Woolsey Bacon. (Funk & Wagnalls. \$1.50.) We know a whole class of readers to whom the book will be charmingly disagreeable. The "simplicity" in this book is the simplicity of edged tools. All over its pages are marks of the most ingenuous ingenuity. This book should be read by all young preachers, so that their sermons may not be like these, but that they may study a man, a preacher, who is fresh, original, tender, reverent, independent, and who has learned how to get sermons out of much thought without loading the sermons with much thought.

"ENGLISH HYMNS; their Authors and History," by Rev. Samuel W. Duffield (Funk & Wagnalls, \$2.50), is a very full and satisfactory treatment of 1,500 well-known and popular hymns. There is a history of each hymn and of its author. Mr. Duffield brought to his task not only very great industry but also more than usual poetic taste, being himself no mean poet. The volume will be of great value to pastors as well as to all other lovers of lyric and sacred poetry. The knowledge of the history of a hymn often adds to its power of education. Mr. Duffield has performed a most valuable service to the Church Universal.

"THE WINE QUESTION IN THE LIGHT OF THE NEW DISPENSATION" is the title of a volume containing five different books on the temperance question, by John W. Ellis, M.D. It

contains a great mass of information gathered from many sources. It is published in New York, by the author.

“HUDSON’S GREEK AND ENGLISH CONCORDANCE OF THE NEW TESTAMENT” is a well-known book, really indispensable to theological students and clergymen. We simply call attention to a new edition of this book, prepared under the direction of Horace L. Hastings, editor of *The Christian*, and revised and completed by Ezra Abbot, D.D., LL.D., Professor in Harvard University. It is crown 8vo, pp. 742. Price, \$2.50.

“SOLAR HEAT, GRAVITATION, AND SUN SPOTS,” by J. H. Kedzie, with 22 illustrations (S. C. Griggs & Co., \$1.25), attacks no settled scientific doctrine, but presents a new theory to account for the phenomena indicated in the title. Prof. E. Colbert, late of the Dearborn Observatory, tells us that this author has struck out a line of argument which is partially new in its application if not in its basic idea, and has developed it in so forcible a manner that probably many will be inclined to accept it as the most satisfactory explanation ever attempted of solar phenomena.

“THE JEWISH ALTAR” by Rev. Dr. John Leighton, is a small volume of 126 pages (Funk & Wagnalls, 75 cents), the intent of which is that the laws of the Mosaic altar-ritual furnish most valuable, if not necessary, guides to the cross of Christ. The book is written with ability and care. While some portions of it conflict with the views commonly held on the subject, as a whole this treatise will have a wholesome influence on exegetical studies and certainly deserves a wide circle of readers.

“GOTTHOLD’S EMBLEMS” is a book two hundred years old and known to German Christian readers generally, among whom it has had great popularity. In some measure also it has been known to English and American readers. A capital translation by Robert Menzies from the 28th German edition is now published in this country. (T. Y. Crowell & Co. \$1.25.) The simple spirit and quaint wit of the book will commend it. The sub-title is “Invisible Things understood by Things that are Made.”

Pages 68 to 80 are omitted in this edition. They contained a list of the members of the American Institute of Christian Philosophy. The list, revised and corrected, can be found in later volumes.

CHRISTIAN THOUGHT.

ACCORD BETWEEN PHILOSOPHY AND FAITH.

[The Anniversary Address delivered before the American Institute of Christian Philosophy, August 25th, 1886.]

BY RANSOM B. WELCH, D.D., LL.D.,

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WHETHER Philosophy is in accord with Faith has been persistently questioned and denied.

The proper answer to this question is of great moment to every one. It is specially so to us, for it involves the *raison d'être* of this Institute—the right of the American Institute of Christian Philosophy to exist.

In this paper I wish to indicate some of the salient points of contact between Philosophy and Faith—*some* of the salient points, for the paper must be too brief to include all—to *indicate* these, for the paper will be too brief, indeed, to do full justice to any.

In view of the important question at issue, let us trace the meaning and method and purpose of Philosophy, and the validity and value of its conclusions.

In each and all of these five particulars, I think we shall find a firm accord between Philosophy and Faith. Faith, as the term is employed in this paper, is both *theistic* and *Christian*. The Saviour said significantly to the disciples, “Ye believe in God; believe also in Me,” thus combining practice and precept.

In this brief statement, He gives us the vital principles of faith from which as a centre may be described the entire circuit of faith.

It may be well, at the outset and once for all, to remark that Faith, with authority, condemns "vain philosophy and science falsely so called"; but welcomes the true. This condemnation, human reason and common sense approve.

While Faith is by birthright sensitive and discriminating, so is true Philosophy, as we shall see hereafter.

Philosophy as well as Faith has its postulates, or regulative principles. Let us mention some of these:

(1) Philosophy must be assured of its true starting-point and of its goal. It must have a principle and a purpose. It is rational only as it includes these two; and, therefore, valid only as it includes these.

It must begin with what is nearest and certainly known—that is, with the rational or thinking soul itself. All knowledge begins in consciousness. What we are conscious of, that we know. This is a first postulate, fundamental and indubitable. The deepest element of consciousness is *self-consciousness* which gives us the assured knowledge of our own mental existence. Having this, we can proceed to other knowledge. Without this, we cannot even start in the pathway of knowledge.

(2) Philosophy must admit and appropriate all the facts and faculties of mind—intelligence, emotion, choice, desire, conscience, reason. Especially must it not discard the higher or rational powers. A philosophy which denies facts and faculties of the mind, particularly if these be the higher facts and faculties, must itself be denied and rejected as nescient and as unpardonably defective in its nescience.

(3) Philosophy must be constructive, not destructive, else it were suicidal; and suicide is both a blunder and a crime.

(4) Philosophy must follow the guidance of consciousness in regard to man and his environment, as to what he is, and how he is related to or correspondent with his environment.

(5) Philosophy must distinguish between the different in kind, as well as in degree—between the animate and the inanimate, the mental and the physical.

(6) Philosophy must seek and recognize characteristics and manifestations of mind wherever they exist, whether in man himself or in his environment; and must give them due consideration

as of superior value according to his estimate of these in himself, in his own dual nature, mental and physical.

(7) Philosophy is to seek for wisdom, and not merely for knowledge. Though there cannot be wisdom without knowledge, yet knowledge does not exhaust the idea of wisdom. Even poetry has discriminated here. Significantly has a poet-laureate written:

" Let knowledge know her place ;
She is the second, not the first.
A higher hand must make her mild,
If all be not in vain; and guide
Her footsteps, moving side by side
With Wisdom, like the younger child:
For she is earthly of the mind,
But Wisdom heavenly of the soul."

Science may seek solely for knowledge, as in the accumulation and classification of facts which it presents as its due offering to Philosophy for a higher use. But Philosophy is to seek for *rational principles in the origination* of all these facts, whether in man or in his environment, and for *rational purpose in the beginning and the end* of these facts. Here is its goal, as well as its beginning.

(8) Philosophy *starts* with experience, however this may have originated. This experience, however it may originate, is always internal—an experience within the soul; else it is not experience.

(9) Philosophy *proceeds* under the guidance of something higher than experience, viz.: Reason; yet it never outlives experience, never contemns or excludes experience. Hence its footing is firm and its guidance trustworthy. Experience and Reason, for the certitude of Philosophy, evermore test and attest each other. In this, especially, is true philosophy differentiated from false or vain philosophy.

In the light of Reason, it is seen how experience is possible and how Reason itself is a safe guide for Philosophy. In this superior light, the principle and the process of philosophy, both, are rational. "Reason," as Bishop Butler says, "is a verifying faculty."

(10) Tenth and last—Philosophy, then, in its principle or

beginning, in its goal or end, and in its process, is rational. In these three, primary and essential characteristics, it commends and certifies its title as Philosophy—the love of wisdom.

Now, if true to its principle, its purpose, and its process, its attainments must be valid, and as valid must be valuable. Not that Philosophy is all-sufficient, for this it does not assume to be; nor omniscient, for this it utterly disclaims—this, finite reason positively denies.

Our position is, that Philosophy is not identical, but is in accord with Faith—in its principle and its goal, not coincident with faith, but in accord with faith; in its process, not necessarily parallel, but really in accord with faith.

Philosophy and Faith are, both, related to a rational soul. They are predicate only of persons, never of things. Both are processes of rationality, native to it and inevitable, however forbidden or repressed.

Knowledge begins in consciousness. But in the very fact of consciousness appears the challenge—within and without—to philosophize and believe. The work of training for each promptly begins, according to the powers of the soul and the force of the environment. The young soul, by its very dependence, is trained to trust, and, by the very things seen, is trained to philosophize in the love of knowing and hence of seeking the unseen; is trained to believe and affirm the reality of its own selfhood, though unseen; is trained to believe and affirm the reality of external things and of other persons like itself. In both directions the phenomena, alone, are seen; yet the real essential persons, the real essential things, though unseen are indubitably affirmed.

Already the child appears, as he really is, “the father of the man” in philosophizing and believing. Unconsciously, perhaps consciously, at least really he is entering upon the true work of Philosophy and Faith—a work which he cannot be compelled to forego, and which he would not if he could forego, and he could not if he would.

Both Philosophy and Faith are normal to man—to man as he is constituted and environed. Early in childhood is reached, on the one hand, the great reality of self as the subject of all his sensations and experiences and as the author or personal cause

of all his actions or choices; and, on the other hand, the reality of external things as the physical cause of all his sensations and as the material objects of his actions and choices.

“ The baby new to earth and sky
 What time his tender palm is prest
 Against the circle of the breast,
 Has never thought that ‘ this is I.’

“ But as he grows he gathers much,
 And learns the use of ‘ I ’ and ‘ me,’
 And finds ‘ I am not what I see,
 And other than the things I touch.’

“ So rounds he to a separate mind
 From whence clear memory may begin,
 As thro’ the frame that binds him in
 His isolation grows defined.”

Rapidly is he trained to the recognition and discrimination of causes as pleasurable and painful, as good and bad, as responsible and irresponsible, personal and impersonal. This recognition starts, perhaps, with his own personal causality; and the discrimination perhaps begins in regard to his own actions. But however this may be, the recognition and discrimination concerning himself and his own actions guide and confirm his judgment concerning others.

Thus, he early recognizes physical causes and spiritual or moral causes, and discriminates between the moral and the non-moral.

Already he has philosophized to moral obligation and desert. Already he believes in conscience, in the discrimination between right and wrong, in praiseworthiness and blameworthiness. In other words—he has philosophized to moral government; he believes in moral law and its sanctions of rewards and penalties, whether he employs these terms or not.

Rapidly his Philosophy and Faith are reaching out beyond the things seen and fleeting, to the things unseen and abiding. These lie around him in his infancy and increase with growing years. The challenges are constantly arising from within and from without.

Consciousness; self and not-self, both real, both related; effect and cause, both real, both related; conscience and obli-

gation; obedience and disobedience; merit and demerit; the seen and the unseen are already apprehended by Philosophy and Faith as real and as related. Thus far—and far is it, indeed—Philosophy and Faith are in accord. Already and irreversibly have Philosophy and Faith entered together upon lines of thought which pervade not only extension but space—not only time but eternity.

If it be true, as a great philosopher has said, “that man as truly rational, is perpetually aspiring after wisdom,” we come at once to the spirit and source of true Philosophy—its deepest, real meaning.

Its very name indicates its character. Philosophy, with becoming modesty, styles itself not wisdom but *the love of wisdom*. This implies the sympathetic enlistment of all the mental powers, not merely the intellect, but the emotions also, and the reason, conscience, and will. This, at once, gives encouraging promise of good philosophic work and good philosophic results. In this, Philosophy is differentiated from science, which is intellectual, which observes and classifies, that it may *scientifically know*. But Philosophy is farther differentiated from science—science would classify phenomena, that *it may know the general order* which it scientifically styles a law; while Philosophy believes there is something deeper and more efficient than mere order which, true to itself, it seeks to know—something *which produces and efficiently constitutes the order*, without consulting science; with an authority to which science must bow, and with a significance which science cannot annul but must justly report and interpret or stand exposed as false science.

But Philosophy is still farther differentiated from science by believing that there is more than mere phenomena, however well ordered—something more than mere phenomena for it to deal with and more important for it to seek and find—*something which produces the phenomena*—something real which originates the phenomenal and which, unseen and hidden, the more forcibly challenges Philosophy to the search and the finding—something which is the true heart and life and soul of the phenomenal, with which the philosophic soul may commune.

To this, Philosophy is trained even by science itself, which is

a schoolmaster according to law to bring it to a better knowledge—trained by its very experience from childhood; embraced by the maternal arms, nestling in the maternal bosom, the embryo philosopher feels the pulse of love which is hidden and beholds in the maternal dalliance the love which gives to the eyes their brightness and to the bosom and embrace the significant token of a living personal love—trained steadily and thoroughly by growing experience to pass beyond the letter to the meaning of what it reads upon the printed page, to pass beyond the phenomena to the realities of its environment—an environment of realities which reaches outward and onward among real persons and worlds—the spiritual realm and the material.

Philosophy then does not (as is sometimes objected) discard experience. On the contrary, it adopts and utilizes experience as fully as science; but it does not rest in phenomena, it does not merely tabulate like a calculating machine, it does not stop with experience. It seeks the significance of experience, the principles of phenomena. And never does it cast aside its real knowledge already attained, in its steady advance toward higher, broader, deeper attainments.

The principles by which it verified its rudimental and increasing knowledge are competent to verify for higher attainments. Hence, while it advances, its method is to advance securely.

In this its differentia from science and in this method, Philosophy is in accord with Faith.

But while Philosophy adopts and utilizes experience, it discriminates between the facts of experience, and affirms it to be unwarrantable and irrational to express the phenomena of matter in terms of mind, *e. g.*: that a stock or stone thinks and wills and reasons and remembers and loves and hates. This is irrational. And equally irrational is it to attempt to express phenomena of mind in terms of matter, *e. g.*: that the mind has length, breadth and thickness. So *Faith discriminates* between body and soul, between spirit and matter, between the Creator and the creation (Genesis i., 1), and its first affirmation is: "I believe in God, the Father Almighty, Maker of heaven and earth."

Following the line of just distinction, Philosophy asserts

two great realities—the external and the internal, the material and the mental, matter and mind—the one known to us by perception, the other by self-consciousness.

So Faith tells of “things seen and temporal” and of “things unseen and eternal.” These latter are spiritually discerned; and upon these, especially, is Faith to look. “My kingdom,” said the divine Teacher, “is not of this world.” “The kingdom of God is not meat and drink, but righteousness and peace and joy in the Holy Ghost.” “The kingdom of God is within you.”

Philosophy, in accepting these twofold phenomena as facts in the real experience of life, admits—affirms effects produced by twofold causality—material and mental—affirms not only the temporal relation of precedence and subsequence, but also the causal relation of antecedence and consequence, *i. e.:* of cause and effect. This truth Philosophy affirms as primary, axiomatic, universal—not only for one but for every effect.

Philosophy knows the noumenon or cause not in the same way in which it knows the phenomenon or effect. Yet it affirms the noumenon or cause no less certainly than it affirms the phenomenon or effect.

Philosophy in affirming the reality of effects and causes must go farther, and in the light of reason affirm the great principle of primal causality implying the truth of ultimate origination to which effects or changes may be finally retraced. In regard to this primal principle Philosophy does not hesitate, but affirms with the utmost assurance, that something is self-existent and external; that this something, self-existent and external, is the ground or origin or cause or author of all things that begin to be; and is the adequate cause of all things that begin to be. Here Philosophy is in strict accord with Faith (Heb. xi., 3): “By faith we understand that the worlds were framed by the word of God, so that the things which are seen were not made of things which do appear.” (See also John i., 3.)

Philosophy would seek not only causal efficiency adequate to the production of each and every effect; but, as the love of wisdom, it would seek the *manifestation of wisdom* in such causal efficiency, *i. e.:* intelligence and purpose combined in an orderly causal efficiency. Indeed Philosophy, as itself rational, in find-

ing an efficient adequate cause or author of all things, finds a final cause conditioned or implied. In the light of reason, the one would not exist in isolation; both would coexist. The efficient presupposes a final, and really embraces the final. It is the dictate of rationality that an adequate causal efficient, or author of all things, should act wisely toward a worthy end in the preadjustment of means adapted to secure such an end—in a word, adequate causal efficiency acting with a constant, rational purpose. (Here we have valid basis for all inductive science and deductive, and the only valid basis.) Thus Philosophy, by the very urgency of Reason in studying the world-problem and re-tracing effects, finds a rationally ordered cosmos or universe, not a chaotic one, and satisfies the longing of all science and Philosophy by a complete unification in one supreme rational cause, and one supreme rational purpose. These grand conclusions of Philosophy, though not identical, are in accord with Faith as in Rev. iv., 11: "Thou hast created all things, and for Thy pleasure they are and were created." "According to the good pleasure of His will," as Paul declares (Eph. i., 5); and as David sings (Ps. cxxxv., 6): "Whatsoever the Lord pleased, that He hath done."

Philosophy would *know* the primal cause or author by *observing the phenomena or manifestations* (by observing the things that are made). Conscious of individual mental existence and personal characteristics, it knows other causes or persons by the manifestations which they give of themselves. So, by rational but valid transition, it knows the primal cause or author of all things by the manifestations which he doth make. The philosophic, inevitable conclusion is, that there are manifestations of supreme power and purpose, of supreme wisdom and design, of supreme intelligence and holiness. But these are the elements of personality. The primal cause or origin is, therefore, the *personal author* of all things—is Jehovah, I am that I am.

Philosophy is in accord with Faith in regard to this supreme reality—this Truth of truths (Romans i., 20): "For the invisible things of Him since the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and godhead." "The heavens declare the glory of God; and the firmament sheweth His handy-work. Day unto day

uttereth speech, and night unto night sheweth knowledge." (Ps. xix., 1, 2.)

This time-honored rule of Philosophy and of Faith is not invalidated by modern discovery, but rather strengthened. It needs no vindication at my hands; it vindicates itself before modern captious criticism. Philosophy finds mind in man as a reality—a reality of which we are conscious. In this is the ground and the possibility of our knowledge. This cannot be denied without the denial of knowledge—without philosophical suicide. On the contrary it is affirmed with all the assurance of individual self-consciousness and the consentient consciousness of humanity. Philosophy, by the superior right of reason, plants itself upon this consciousness as fundamental and impregnable. Illustrations, evidences, proofs of intelligence, of mind, of thought, of plan and purpose and pre-adjustment abound in nature—in the small and the great, in the particular and the general, in the typical and the universal. I need not stop here to specify. The proof of rational purpose, of intelligent authorship is more than convincing, it is embarrassing in its fulness.

One of our ablest geologists of to-day, Principal Dawson, has said: "That the universe *must have had a beginning*, no one needs to be told."

One of the foremost botanists of America—Dr. Asa Gray—thus vigorously states the alternative: "To us, a *fortuitous* cosmos is simply inconceivable. The alternative is a *designed* universe."

Fearless of contradiction, the great founder of the inductive philosophy—Francis Bacon—declares: "The light of nature is sufficient to demonstrate a deity. As the power and skill of a workman are seen in his works, so the *works of God express the wisdom and omnipotence of the Creator*." Hence, as Bacon implies, philosophy need not prove the Divine Being, but *trace* the proof in the light of nature which demonstrates a deity; for, "Man is the minister and interpreter of Nature." "I had rather believe all the fables in the Legend, and the Talmud, and the Alcoran than that this universal frame is without a Mind." The force of this Baconian confession is confirmed by inductive science in every direction. The very language of Charles Darwin is full of

teleological terms, as President Porter has well said. The central principle of Herbert Spencer's theory, that "all organic development is a change from a state of homogeneity to a state of heterogeneity" is borrowed from a writer trained in an eminently spiritual and theistic school of thinkers; his final unification to a supra-mundane power, the Great Unknown, formally and inevitably recognizes "faith as a necessary supplement to philosophy; and his assertion that this supra-mundane power is a somewhat whom all must reverence and worship, concedes not only that man knows there must be and is a God, but, in some sense, that he knows who and what He is." A single sentence from the writings of a modern progressive theologian and an advocate of theistic evolution contains a sufficient though undesigned answer to the nescient theory of Spencer: "The farther we go back *the more* we are impressed with the power and presence of a Creator."

Indeed, Evolution (in any of its varied forms), if it were admitted and demonstrated, accounts not for the production but for the proceeding—not for the originating but for the ongoing—not for the beginning but for the becoming. In the light of true Philosophy and in the vision of true Faith, Evolution of whatever form can become explicable and luminous only as it is interpenetrated with the thought and the purpose of God.

The poet Schiller, as if addressing not only the men of our time but of all times, writes in "Don Carlos," act iii., 10:

"Look round and view God's lordly universe
* * * * * * *
Him, the Maker, we behold not; calm
He hides Himself in everlasting laws;
Which, and not Him, the sceptic seeing, exclaims,
'Wherefore a God? The world itself is God.'
And never did a Christian's adoration
So praise Him as this sceptic's blasphemy."

As I have said elsewhere (see "Faith and Modern Thought," p. 272), Faith declares mind ultimate, mind infinite and eternal. Hence, mind is primary and supreme; and evolution, if it were demonstrated, would be originated and controlled by divine wisdom and power, and nature's laws at the same time be effi-

cient and uniform—efficient, because sustained by divine authority; and, although variable according to the divine behest, yet uniform because of the divine faithfulness, which “is unto all generations.”

Herbert Spencer declares that “complete unification is the substantial business, the goal of Philosophy.” (“F. Prin.” §§ 40 and 45.)

Agnosticism speculates to a unification by *ignoring* the superior facts and faculties of mind which claim to be included and which demand a more rational and comprehensive unification, not in a great unknown and unknowable somewhat which we must revere and worship, but in a personal supreme Author whom we may know and love and serve.

Materialism speculates to a unification, not in mind but in matter, by *denying* and *rejecting* the facts and faculties of mind as distinct from matter, thus contradicting consciousness, repudiating the authority of conscience and reason, debasing the rational person into a thing, and consummating in atheism.

Pantheism speculates to a unification by *excluding* all real distinction between matter and mind, and at the opposite extreme from materialism identifying the different in the monster *Pan*—making God all things, and all things God. One of the best answers to such speculations is their simple statement. Now if our task has been properly performed, we have abundantly shown that *Philosophy is theistic*.

On these fundamental and essential grounds which we have just traversed, Philosophy firmly stands in full accord with Faith.

Thus Philosophy vindicates its character as Sir Wm. Hamilton briefly states it: “The application of reason to its legitimate objects; the science of the relations of all knowledge to the necessary ends of human reason; the science of the Absolute;” or, as it is more fully described in the language of the Imperial Lexicon: “That which labors to determine the laws or ultimate principles in obedience to which the mind itself operates; that which seeks to discover the ultimate foundation of all that it knows or conceives; to discover what itself is and what is its relation to all things, and so, strives to form a system out of all such ultimate laws or principles. Such a system may

be called Philosophy in the absolute sense of the term." In this primal field of thought and reality, true Philosophy is, as we have seen, confessedly *theistic*.

But there are other and higher fields of thought and reality which challenge and invite the earnest study of Philosophy, viz., the moral and the religious. The theistic conception already attained by Philosophy does indeed virtually and logically involve the moral and religious truths which are of such high value in all philosophic seeking and finding. Philosophy may legitimately avail itself of this rational implication, and advance by this *short deductive* way to the valid and vital conclusions. The philosophic conception of a supreme, wise, personal Author of all things involves supreme, divine morality and supreme moral government throughout the entire realm of rational, moral creatures.

"Will not the Judge of all the earth do right?"

"Thou lovest righteousness and hatest iniquity."

"Be ye holy, for I the Lord your God am holy."

"Be not deceived. God is not mocked; according to what a man soweth, that shall he also reap."

And further, this philosophic conception also implies religion as a corresponding relation of the rational creature—a relation enforced by finite dependence, and moral obligation, and religious impulse. This religious relation, like the moral implied in this theistic conception, is so evident that I need not stop to prove it or even illustrate.

These philosophic conclusions are in accord with Faith :

"Thou shalt love the Lord thy God, and Him only shalt thou serve."

But while Philosophy may and does avail itself of this short, deductive, valid pathway to these great moral and religious conclusions, it has also an *inductive*, valid way to the same great conclusions.

Concerning these practical and vital truths in the field of ethics and religion, Philosophy is supplied with a *twofold method* mutually corroborative, and each conclusive.

Here, by inductive lines, let us take a rapid philosophic survey first of the *moral* field.

We know by experience and observation that moral obligation exists; that it is more than mere custom. Ethics has its roots in personality—reason, conscience, will. Reason affirms a real distinction between right and wrong (although it may not in all specific cases justly apprehend the distinction). Conscience presses upon every rational soul the obligation to do the right and avoid the wrong. Each person is morally held, whether he will or no, to bring the actions of himself and others to the test of right and wrong. The moral judgment is the highest judgment of the rational soul. He holds himself and others accountable—morally accountable. Custom, profit, pleasure, success, gratification of appetite or passion, malice, envy, revenge do not justify or exculpate the offender. This rule of ethics holds with the individual, the family, the state. This moral rule is supreme, distinguishing between guilt and innocence, between merit and demerit. There is a moral power *in ourselves and in society* that makes for righteousness, and *a power not ourselves* that makes for righteousness. But righteousness is a personal quality. Already in the light of reason, glimpses unmistakable appear of personal authorship of law and personal administration of law. In the light of reason, ethics should seek for a personal, moral lawgiver. Conscience speaks with an authority which represents to the individual soul this power not ourselves that makes for righteousness; and thus conscience points unmistakably to a *personality* not ourselves that makes for righteousness. The inductive evidences are multiplying and converging upon *this personal, moral, supreme issue*. Each and all find ourselves under the reign of law, a moral law which we did not originate—a moral law enforced by sanctions (rewards and penalties—rewards for obedience, penalties for disobedience)—a moral law in accord with rationality, and addressed to rational persons and not to things, and to which human reason and human conscience give their attestation and approbation—a moral law attended with the power of execution, a power which evermore makes for righteousness real and personal, which compels us not only to bring all our personal actions to a moral judgment, but to estimate the worth of all things by a moral standard and to place the value of what is moral and spiritual at the summit of excellence.

The inductive evidences for morality and moral government converge to the same conclusion, and both the inductive and the deductive are alike indubitable.

In the physical world we are under law, while the alternative is submission and safety, or resistance and ruin.

In the higher, the moral realm, we are assuredly no less under law, while the alternative is obedience and blessedness, or disobedience and death.

Philosophy can now listen without surprise to the teachings of Faith : "The life is more than the meat, the body more than raiment. Yea ! all that a man hath will he give for his life." "What shall it profit a man if he gain the whole world and lose his own soul? What shall a man give in exchange for his soul?"

"There is a law written in the heart, the conscience bearing witness thereto, and the thoughts or reasonings one with another accusing or else excusing them."

"If our own heart condemn us, God is greater than our heart and knoweth all things."

Even starting on the low level of agnostic speculation, or the lower level of pantheistic indifference, or the lowest level of materialistic atheism, we cannot hold our way in morals without diverging toward these great moral conclusions.

Philosophy (if there be any philosophy) should seek the best in morals and in religion (if there be any morality and religion). This would be the dictate of individual selfishness and social prudence and civil welfare. And in this direction it is demonstrably true that Christianity has reached the summit of rational thought. The law is holy, just and good. The Lawgiver, as Immanuel, God with men, has exemplified the perfect law in His perfect life on earth. No moral conception can transcend the moral precept and practice of the Christ.

But passing by this merely prudential consideration which should hold philosophic control over materialistic atheism or pantheistic indifference or agnostic speculation, we say that true Philosophy should seek to know and in the love of wisdom is impelled to seek the best in morals and religion—impelled by rational necessity and inherent impulse. To do otherwise is to prove untrue to itself and false to the claim of right

reason. There is a philosophy of ethics which, as we have shown, has the authority of reason and conscience. By such authority it inspects literature and art, social custom and civil government. Its proper principle is ethical right. Its legitimate purpose is the moral good of humanity. Its office is to protect society. As a primary postulate it declares society organic, interpenetrated with enduring and expanding vitality, pervaded by a law of growth or progress. For the healthy life and successful growth of society there is needed the application of an ethical rule—a moral obligation individual and public. Divorced from morality, literature becomes licentious; art, debasing; social custom, corrupting; civil government, despotic. But philosophy of ethics, while it includes instead of excluding literature and art, the true and the beautiful, *seeks especially the good*—the good *to the exclusion of the evil*. Its desire and goal must be moral excellence and moral blessedness. In the very nature of the case, it not only should but it *must* seek the best, and can be satisfied only with moral perfection. The vital element in the law of social progress, according to philosophic ethics, is moral obligation individual and public—the law of love, or moral, personal respect each for himself and each for all. This philosophic principle must practically pursue and promote the moral good of each and of all. Steadily it must seek a more certain and comprehensive application, addressing itself with increasing urgency to every conscience, reminding society more and more of its moral brotherhood, that no man liveth unto himself; contrary to the false ethics of materialistic evolution it declares, “that we who are strong ought to bear the infirmities of the weak, and not to please ourselves; that each one should please his neighbor for his good unto edification—in honor preferring one another.” But this is the teaching of Faith as well as the precept of moral Philosophy. Here, on this higher level of ethics, Philosophy is in accord with Faith. Indeed, Philosophy loving wisdom and seeking evermore the best in ethics, would be both rationally bound and affectionately drawn to adopt the moral law of Faith, supreme as it is in moral excellence. This is the desire and goal of true Philosophy in the sphere of morals. Paul in his weakness and strength—the philosophic, ethical Paul—has voiced the moral feeling and confession

of us all: "The law is holy, and the commandment is holy and righteous and good. If what I would not, that I do, I consent unto the law, that it is good."

But morals, having their sole relation to persons and having their supreme source in supreme personality, are indissolubly linked with religion. This is the higher level to which true Philosophy should rise—the higher relation which Philosophy cannot ignore or reject—man's spiritual relation. There is doubtless a philosophy of religion as well as a philosophy of morals or of mind, of nature or of history. We have observed Philosophy in its great environment as it has sympathetically and successfully traced its relations to matter and to mind, to history and to morals, to the impersonal and to the personal. But here is a crowning relation which Philosophy must recognize and trace, or prove false in its highest field of obligation and service. Here, as elsewhere, Philosophy as the love of wisdom is by nature and obligation bound to seek the true and the best. Here, emphatically, the true is the best, and the best is the true.

All other relations have their supreme significance in this. If matter is of value not in itself but in thought, and thought has value according as it is moral or immoral; so, matter and mind have their crowning value in their relation to spirit—even the Supreme Spirit. Everywhere this relation has in some way been recognized. On this point the consensus of humanity furnishes both complete illustration and conclusive proof. Friends and foes (of Faith) unite in affirming that "the religious element is one of the strongest in the human soul." (Boston *Radical Club*, applauding this statement by one of its lecturers.) Mr. Huxley ("Lay Sermons, Etc.," p. 16), speaks of the religious sentiments as "the noblest and most human of man's emotions." Mr. T. W. Higginson declares: "The religion of the heart can never perish, because it is a human instinct." Herbert Spencer, recognizing the religious sentiment as inherent in humanity and ineradicable, raised a flag of truce on the old battle-ground between science and religion; and confronted by the presence of a power and mystery inscrutable to science, proposed conciliation between religion and science. This proposal in the inter-

est of science has been quite recently answered by Henry Drummond in the interest of religion in the desire for reconciliation between science and religion.

As some one has said, perhaps correctly, at least forcibly, "Mr. Spencer has affirmed that there lies a religious element at the back of science. Mr. Drummond has affirmed that there is a scientific element at the back of religion, and that the scientific element consists in those very laws of biogenesis and natural selection which were supposed by a former generation to form the strongest barriers to religion" (George Matheson, D.D.).

Deism, pantheism, agnosticism have philosophically recognized this abiding human sentiment, and have permitted or promoted worship. Materialistic positivism indeed attempted—deliberately attempted to rule out religion from its theory and its practice. But by resistance and rebound it was driven to a recognition and incorporation of this spiritual element in its more mature system. This reaction completely reversed the religious attitude of Comte, and from his earlier exclusion of religion he proceeded to elaborate the "religion of humanity" which the *Catechism Positivist* has made somewhat familiar to the public. This prescribes that thrice daily shall men pray everywhere to deified woman as the representative of collective humanity. Worship, dogmas, discipline, architecture, altars, priesthood, symbolism, gestures, sacraments—all the details are minutely given in this ritual of positivist religion; and all bear reluctant but inevitable testimony to the strength of the religious sentiment.

I have dwelt the longer upon this admission of foes and friends to faith—the admission, that man is a religious being—because it is fundamental toward theism and significant of its inherent vitality. But all religions lead to the primal, ultimate truth—God. Indeed, religion is, strictly, a recognized relation toward God and dependence upon Him. Without this the term itself is deprived of significance. Along these lines of moral and religious thought Philosophy is in accord with Faith. The struggle and progress of humanity should be—is—upward toward morality and religion; in morality, how most to improve the individual and best to unite men in society; in religion, how best to purify the

heart and unite men to God. Even "the survival of the fittest" as a prudential principle would require this. But true Philosophy sees this to be reasonable as Faith directs : "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy strength, and with all thy mind; and thy neighbor as thyself."

No wonder that the "certain lawyer," more than foiled in his question, replied, "Master, Thou hast answered right; this do and thou shalt live."

Here is, indeed, the perfection of morals and of religion. True Philosophy recognizes the twofold obligation as just and holy, and human reason with bared brow and bowed heart bends reverently in presence of the Divine.

But now in the light of human history and universal experience we read the sad confession that human *morality needs* help and rectification and guidance and guardianship; religion needs purifying, ennobling, perfecting. In the certain knowledge of Philosophy, moral evil prevails, sin abounds, death reigns. The whole creation is travailing in pain together, waiting for help—and longing for rescue.

The problem of life—especially the moral, spiritual problem—confronts and concerns Philosophy, as it concerns and confronts humanity. Philosophy cannot, if she would, ignore or avoid it. But can Philosophy solve the problem? True to her method, reading human experience in the light of human reason, can Philosophy answer the moral questions that arise? *How shall sin be treated?* In the method of justice or of grace? Of penalty or of pardon? If of penalty, to what extent? If of pardon, upon what ground and condition? If an administration of grace be adopted, how shall it be made to harmonize with justice? If there be propitiation, what shall be the sacrifice? If there be mediation, who shall be the mediator? To whose hands shall the administration of grace be committed? Shall this gracious administration continue forever? If not, when shall it end and how? If there has been temptation, shall grace reach the tempted only, or the tempter also?

These, and the like, are unavoidable questions which human reason must ask in the interests of the human soul and of the

divine government. Philosophy by its very impulse and need, if true to itself, seeks for wisdom in these supreme issues—seeks for wisdom which cometh to it from above, waits in its darkness and its deep desires for light to shine and a voice to speak from the Divine Reason and point out the way, the truth and the life. The wisest philosophic attitude in such an emergency is for finite human reason to wait upon the Divine Reason and listen to the voice that shall speak with authority.

These great questions more than refute the arrogance of rationalism—that human reason alone is all-sufficient. They demonstrate the incompetence, the impotence of human reason for spiritual relief, redemption, restoration. In the presence of these supreme questions and wants of the soul,

Alas, " we know not anything.
We falter where we firmly trod,
And falling with our weight of cares
Upon the great world's altar-stairs
That slope thro' darkness up to God,
We stretch lame hands of faith, and call
To Him who is the Lord of all."

Philosophy by the very light of reason sees the need of a higher light. It sees in these supreme questions the urgent necessity for a completed revelation to a world of sinners. These questions indicate also the possible if not the necessary revelation of a Saviour, and by a Saviour. Trained by what it has already sought and found in its love of wisdom—trained too by supreme moral and spiritual needs, it waits in supreme accord with Faith—waits upon the new Messenger and His message, not repelled, not even surprised, but satisfied rather with Faith to read: "The Word became flesh and dwelt among us." "In Him was life and the life was the light of men." "He is the true light which lighteth every man that cometh into the world." "God so loved the world."

To this, Philosophy from the time of Socrates ever has looked with longing, that God would reveal Himself especially to a sinful world, separated from Him by sin and lost. But, evidently, if God reveal Himself to man, it must be by word, or in person, or both, so that man can understand the revelation. If by word,

it must be in human language that man can understand. So, "all *Scripture* is given by inspiration of God," that it may be profitable as a revelation. If in person, it must be by incarnation ("manifest in the flesh"), as we are revealed to each other. You cannot reveal by sight to a blind man, nor by hearing to a deaf man.

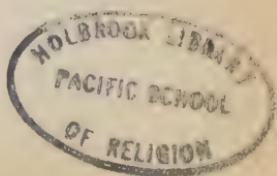
Thus true Philosophy would assert, that the fullest revelation of God to man must be by incarnation. So Faith declares: "God who at sundry times and in diverse manners spake in times past unto the fathers by the prophets, hath in these last days spoken unto us by His Son," "who became flesh and dwelt among us." Thus true Philosophy, which was already theistic, is now and ever shall be *Christian*. This is in accord with the precept of the Christ, "Ye believe in God; believe also in Me."

We are prepared now and authorized to advance rapidly.

Incarnation, which thus commends itself to Philosophy and Faith—Incarnation, the first great act in the fivefold work of redemption, leads to the second, viz.: *Mediation* for sinners, and to the third, *Organization* of the kingdom of Christ in the hearts of His people and through the Church universal.

And these give assurance to Philosophy and Faith that in the rational purpose of God and in the plan of His grace there shall not fail the *Administration* and the *Consummation* of His kingdom.

The Incarnation interprets and illuminates the whole Scripture. Types and symbols, prophecies and promises and fulfilments centre in Christ and in Him glow with significance, and will forever grow in significance to Christian Philosophy and Faith. On this ladder of incarnation, Jacob in vision saw messengers of mercy ascending and descending. So from this first great act in the work of redemption, we trace the other acts in succession—*mediation* with all that it involves essential to the kingdom of God on earth and in Heaven; *organization* of that kingdom in the hearts of His children in the Church universal; the *administration* of that kingdom by the ministration of the Holy Ghost whom, saith the Saviour, "the *Father* will send in My name," and the *consummation* which shall be wrought "not by might, nor by power, but by *My Spirit*, saith the Lord of hosts."



These five great acts—incarnation, mediation, organization, administration, consummation, complete the work of redemption. These constitute the crowning study of Christian Philosophy and Faith. “These things the angels desire to look into.” These open before us in far-reaching, sublime perspective. I can only name, not even attempt to trace them now. The meagre outline would require, at least, another paper.

In their supreme accord, Philosophy is not only theistic, but also Christian; while Faith believes in God, and believes also in Christ.

If now it be demanded—can human reason fully comprehend Christianity? Faith replies: No; it is a life, not a philosophy of life. Can it be proved? Faith as readily replies: Yes, by divine testimony and by Christian experience. How shall we know it as a reality? The answer is: By trying it. No test can be more simple, or can more readily commend itself to human reason. The answer evermore is and can be no otherwise: “If ye do His will ye shall know of the doctrine.”

In securing this result as a personal experience, it is to be especially remembered that the Holy Spirit effectually contributes—reasoning of sin and righteousness and judgment, quickening the moral powers to a new life—a life of faith upon the Son of God.

A new experience is the steady spiritual outgrowth of this new life of faith. This personal experience is to the soul an earnest of eternal fruition, and a spiritual support and defence, invincible by any form of sceptical or vain philosophy—more than this, a defence and support unassailable by any foe. To the doubting, the hostile, the curious, the candid inquirer, the philosophic and practical reply of Christian experience is: We have found the Messiah. Come and see.

This is not abstract or mythical, but rational and simple, commended to human reason in the light of infinite reason. Henceforth faith works by love. Spiritual conflict and constancy beget spiritual strength and character. “Until we come in the unity of the faith and of the knowledge of the Son of God, unto a perfect man.”

Thus, a poet sang of one,

“ Perplexed in faith but pure in deeds,
Who fought his doubts and gather'd strength,
Who would not make his judgment blind,
Who faced the spectres of the mind
And laid them: thus he came at length
To find a stronger faith his own;
And Power was with him in the night,
Which makes the darkness and the light,
And dwells not in the light alone.”

Faith henceforth assumes its legitimate prerogative. With the consent of Philosophy, it looks beyond human philosophy to something higher. It commends to the human reason a supreme guide, even the divine. It presents the loftiest motives, even those that are infinite and eternal; a perfect rule for belief and life, even the divine Word; an almighty Saviour, even Jesus; an unfailing witness, companion and comforter, even the Holy Spirit. It rewards obedience with blessedness, and prompts to increasing obedience by presenting a faultless model, the perfect Christ, tempted in all points like as we are, yet without sin, leaving us an example that we should follow His steps; a divine friend whom it behooved to be made like unto His brethren that He might be a merciful and faithful high-priest; stooping to our low estate that He might redeem us from the curse of the law and lift us with Himself to the throne of His divine majesty; encouraging and helping us to overcome and sit with Him in His throne, as He also overcame and is set down with the Father in His throne. (Rev. iii., 21.)

Thus, is the problem of life being solved to the satisfaction of Philosophy; and the kingdom of Christ being established to the joy of Faith. Such in the wisdom of God is the gracious consummation in which Philosophy and Faith, with one accord, rejoice:

“ The one far-off Divine event,
To which the whole creation moves.”

In view of such a consummation, the American Institute of Christian Philosophy was organized to bear some humble part in this great movement. Its special purpose is to present Christian Philosophy in more combined and concentrated order, and so, in

more effective form. To present, we say, not to produce; for Christian Philosophy has long been in the field, though uncombined, yet in its vigor and valor holding the mastery and pushing on the advance.

The purpose of this Institute of Christian Philosophy is well expressed in the articles of organization. I call attention especially to the 1st, 2d, and 3d articles:

First.—To investigate fully and impartially the most important questions of philosophy and science, but more especially those that bear upon the great truths revealed in Holy Scripture.

Second.—To associate men of science and authors, who have already been engaged in such investigations, and all others who may be interested in them, in order to strengthen their efforts by association; and, by bringing together the results of such labors, after full discussion, in the printed transactions of an institution, to give greater force and influence to proofs and arguments which might be little known, or even disregarded, if put forward merely by individuals.

Third.—To consider the mutual bearings of the various scientific conclusions arrived at in the several distinct branches into which science is now divided, in order to get rid of contradictions and conflicting hypotheses, and thus promote the real advancement of true science; and to examine and discuss all supposed scientific results with reference to final causes, and the more comprehensive and fundamental principles of philosophy proper, based upon faith in the existence of one eternal God, the creator of all things.

Twenty years ago, a similar Institute was organized in England, styled The Victoria Institute, or Philosophical Society of Great Britain.

At its head, as President, stood Lord Shaftesbury until his death in 1885—Lord Shaftesbury, one of the noblest of England's noblemen—able, modest, faithful, true—a recognized friend and leader in philanthropic enterprise.

As his successor, the Institute unanimously elected Prof. Stokes, D.C.L., LL.D., F.R.S.E. (who is a Professor in the University of Cambridge, England, in the chair once occupied by Sir Isaac Newton), who is also a life member of *The American Insti-*

tute of Christian Philosophy—a foremost thinker, scientist and philosopher.

Our worthy and efficient President, Dr. Deems—in the good providence of God, long may he continue at our head—has been doing for the American Institute of Christian Philosophy what President Shaftesbury has done for the Victoria Institute—seeing it safely through the perils of infancy; completing its organization; multiplying its resources; enlarging its numbers and its influence.

The Victoria Institute in the twentieth year of its existence has reached a membership of about one thousand; while The American Institute has, in this fifth year of its completed organization, five hundred members. As its name indicates, so it seeks not exclusively for profound and mature thinkers (though it seeks especially for these), but for lovers of wisdom, young or old, men and women who are willing to think; and who desire themselves to advance, and to promote the progress of others, in the fields of philosophic thought.

To this end, it is important to secure the ablest papers on Christian Philosophy in its various branches; and thus furnish a varied and valid philosophic literature that shall meet the vital wants of our time at home and abroad, particularly the pressing wants of the educated youth in our own country, and the more immediate wants of the nations just emerging into Christian civilization and with difficulty breaking loose from vain philosophy and false religion.

An urgent demand, then, meets this Institute—to increase its membership; to multiply its means; to employ the best talent in Christian Philosophy; to be awake to its opportunities and duties; and enlarge its influence for good until it shall be felt throughout our whole country and across the seas to distant and still more distant shores. In this way, in prayerful spirit and with increasing devotion, we may greatly promote the good of men and the glory of our divine Lord and Saviour.

“They please Him best, who labor most
In peace to do His will.”

AMERICAN SCHOOLS IN THE TURKISH EMPIRE.

[A Paper read before the American Institute of Christian Philosophy, April 1st, 1886.]

BY REV. JAMES F. RIGGS.

IN the Summer of 1874 a great many people went to Saratoga Lake to see a notable boat-race. The reporters of the daily papers were there, and the published accounts of the race emphasized the interest felt in the various crews, the management of affairs, the rulings of the referees, and especially the genuine enthusiasm of the immense crowd of bystanders. After discussing all these things, however, one of the New York reporters added this significant observation, "The real tragedy was in the boats."

Our theme is one that is walled in with difficulties. The whole subject of education in any country, and under the most clearly defined conditions, is surrounded by a host of unsettled problems. But, while we recognize these as having a well understood claim, we remind ourselves that "The real tragedy is in the boats." The real educator, the man who is set like the brave Hittite warrior of old in the "forefront of the hottest battle," that man gets a view sometimes of the nature of the case, not so clear to the "City Editor," or to the "Easy Chair."

It is a painful spectacle in some quarters to see the conflict with ignorance going on in a fashion that calls to mind the famous letter from David to Joab, in which it was understood that the hero was to be subjected to the most severe test, and then—abandoned! "Retire ye from him that he may be smitten and die."

This is not the purpose of a Christian community, yet in particular instances it has happened more than once. The great cause of Christian education is now in the balance; the question is not speculative but practical; we are to say whether the world is to witness this revolution in the twentieth century, or not. For the world is to undergo revolution by the influence of Christian education, and the question is of methods. The whole

world is the field of our endeavor. The thin end of the wedge has been inserted into every state in the world, with exceptions quite insignificant. The Bible has been translated into more than one hundred and eighty languages. The centre of active evangelistic work in any place must be a nucleus founded by missionary effort, and we know that such nuclei are numerous. What then stands in the way? What is the obstacle, to the removal of which our efforts should be directed?

We have opportunity, the world is open. We have the supreme agent, the Scriptures. We have hundreds of infant churches in this foreign field, each suitable as a nucleus of further advance. But the "laborers are few." *This is the obstacle.* It is at this point that our foreign work has been halting for more than half a century. The consequences are visible in many places, especially in India, where the lack of an efficient native force is most noteworthy.

Some persons have cherished the notion that the world is to be converted by the preaching of men who are in the strict sense foreigners. This we regard as a mere dream. It cannot be done. Apostles, if there were enough of them, might do it; the missionaries can never accomplish such an enterprise, because they are few, and because they are separated in many ways from the masses of their race, because they are foreigners. Think of a preacher, however efficient, with a million souls in his parish! We need something more than missionaries; we need an EDUCATED NATIVE MINISTRY. We cherish a grateful appreciation of the fact that God sent prophets and apostles who were not angels, but men, and the same line of thought that brings us to this conclusion, carried one step further, makes the demand eminently reasonable that Chinamen, Armenians, Parsees, or Bedouins—that all should be under the spiritual care of those who are their kin. We pray for the success of foreign missions; let us pray that each of them may become a home mission field.

It is difficult to enlist an earnest and a continuous attention to themes connected with the East. So great is the variety of influence at work; so many are the strata of society involved; so strangely entangled is the story, that to many persons the entire Eastern question, in its material and its moral aspect, is an

enigma too deep for study. It is the culmination of romance ; it is dream-land ; it is a twisted tissue of eccentricities and follies that can never be estimated in the same way that questions are brought home to us who live under a colder sky, and in a duller atmosphere.

Long cherry-wood pipes, with beautiful amber mouth-pieces ; white muslin turbans and girdles of red stuff worked in gold thread ; little donkeys and big camels ; ancient mosques with elegant tiles of green porcelain ; and under the shadow of this regal beauty, mud huts seven feet square ; lavish extravagance in a thousand forms, and a suffering humanity too ignorant to complain : these take the place of the Eastern question. What a tissue of problems, old and new, may be examined about the end of the Mediterranean ! The site of Eden ; the mountains of Ararat ; the tablets of Nineveh ; the mounds of Babylon ; the countless dumb and nameless statues of colossal stone ; Hittite inscriptions ; Byzantine legends ; the mystery of a cloudless sky ; the great Egyptian river with its sealed past : these things intoxicate the visitor with a new and indefinable sense that he is standing on the border line of a world that is strange indeed !

It is the land of the unexpected, the grotesque, the pitiful, and yet over all that is wretched and repulsive there is shed a soft, mellow light, suggestive of fairy-land, of the lavish hospitality of the "Arabian Nights," of Aladdin's lamp, and of a dim, painless comedy that is singular in its contrasts, compared with the stern battle of our Western and Northern life. The picture of Anglo-Saxon Christendom is drawn in hard lines : there is no picture of the East, save a succession of dissolving views.

Rome thrills the traveller as the birthplace of great thoughts, Athens as a source of art and poetry; but the East is like a gorgeous painting, like the dream of a fairy.

Such a city as Constantinople is more than a city—it is a focus of all sorts of interest, historic, archæological, ecclesiastical, political, and commercial. There are features in that city that call to mind the clear discrimination of the Greeks, the strong common sense of the Romans, the toilsome patience of the monks, the sincerity and warmth of the early Church, and the fortitude of heroes who knew how to die !

The nineteenth century has been not a whit behind others in its proportion of the strange, the uncouth. The romantic and the bloody, the brilliant and the repulsive have been so piled on one another that it is perplexing to know where to begin in work, or in narration. Once the East was master and the West was the learner, but now the terms of the problem have been transposed, and the task before us of the American Churches has been well expressed in the phrase, "The republication of the Bible, in Bible-lands."

The Church has never been permitted to go on with its work in any land undisturbed ; but there has been a maximum of interference in the East. From the persecutions of apostolic days onward history has been written in blood, in convulsions, in long and useless wars. Greeks, Romans, Caliphs, Crusaders have turned back the wheels again and again. And in this century, France, England, and the Ottoman have crossed bayonets with Russians, Tartars, Arabs and Bedouin. In a fit of crusading fury, Roger Bacon proposed to Pope Nicholas IV. to burn up the great Mohammedan cities by the use of focal mirrors, to be erected near those cities. But in this our modern crusade we propose to erect near those cities institutions that shall pour upon them concentrated light, not from the sun, but from the Bible and Christian culture.

The educational forces now operating in Turkey are very considerable ; and to this may be ascribed no small proportion of the good accomplished. The American Board has at work in Turkey (exclusive of Syria and Egypt) more than six hundred native helpers, and this large force represents the efficiency of the schools. But this is not enough. More men are needed for preaching, for teaching, and for the duty of Bible distribution.

An exact and rigid classification is impossible, because the work is not perfectly systematic in all its parts ; *e. g.*, the term "high-school" is not used in the same way in the Eastern Turkey Mission, and in the Western Turkey Mission. So too, theological instruction is sometimes so combined with the literary and scientific, that it is not easy to say whether a given school is a high-school or a theological school.

But it may be said by way of a general grouping, that the

grades are, Primary, Secondary, Academic and Collegiate. The lower grades are numerous, and the pupils enrolled are numbered by thousands.

The total enrolment of pupils, in the Turkish Empire proper, exclusive of Syria and Egypt, is in the neighborhood of fifteen thousand. This remark applies to those controlled by the American Board, and not to similar schools under native direction.

Of this large number, about a thousand are students in the various high-schools and theological seminaries and more than eight hundred are pupils in the boarding schools for girls.

The figures as reported in the last published documents are decidedly encouraging.

| | Colleges and High-Schools. | Pupils. | Girls' Boarding Schools. | Pupils. | Common Schools. | Pupils. | Total under Instruction. |
|----------------------|----------------------------|---------|--------------------------|---------|-----------------|---------|--------------------------|
| European Turkey..... | 1 | 23 | 2 | 71 | 11 | 270 | 389 |
| Western Turkey..... | 7 | 357 | 9 | 486 | 122 | 4,283 | 5,559 |
| Central Turkey..... | 5 | 245 | 3 | 80 | 70 | 3,100 | 3,425 |
| Eastern Turkey..... | 13 | 378 | 5 | 178 | 142 | 4,320 | 5,367 |
| Total..... | 26 | 1,003 | 19 | 815 | 345 | 11,973 | 14,740 |

These statistics do not begin to represent the blessings conferred on the people of that empire by an evangelical system of education, but they may serve as a basis for some kind of estimate. It is plain that each pupil in a school is evidence that something has been accomplished in the family from which he comes.

In this system of schools it is absolutely necessary that we

begin at the bottom, and that we go on till the summit is reached. The reason for this is plain, in the false methods thus far in use ; the errors long cherished on fundamental points ; the deliberate adoption of a perverse taste, and a crooked formula. The end sought cannot be attained by any patching of that which exists in the East; we must give them something new. This remark applies even to the external framework of literary taste, to questions of style, of the bending to new use many stock forms. We must so press that which is better as to compel the retreat of that which is worse. An illustration of the literary taste of Mohammedans will show how important this is in the planning of a work that is to be a foundation.

A Turkish historian, giving an account of a battle near the river Dniester, in the year 1738, says :

“A great number of the accursed ones, destined to Hell, took the fatal leap over the arch formed by the sparkling sabre of the true believers, into the infernal gulf.”

Another, writing of the sacred cities says :

“Samarkand is the face of the earth ; Bukhara the marrow of Islam ; were there not in Mashad an azure dome, the whole world would be only a ditch for ablution.”

In war against the Christians there is a bad spirit shown under any possible conditions. If the Christians are defeated in battle, then they are “dogs,” but if they are successful, then they are “the impious,” “the blood-eating enemies.”

In time of peace there is no real improvement, because the same bad spirit, the same total want of all true sympathy exists. There is nothing in the Mohammedan world on which we may practise grafting with success, in our moral and educational schemes. We are under the necessity of setting before them a new type of manhood, from the very alphabet upward ! For this reason we watch narrowly our entire line of battle, we search the whole vineyard to find the sunny spots : we organize our schools with a view to the most complete occupation possible, of the entire educational ground. It is to be hoped that the provision made will be so full and generous, that at any time a youth who is so disposed can find a place for himself in our primary, our secondary, or high-schools ; and beyond this that colleges will

be opened in such places that no young man shall be condemned by the nature of the case to an unwilling intellectual starvation. In a thickly settled country like the Turkish Empire, no student ought to be compelled to travel more than a hundred miles to college. We have by no means reached any such state of affairs as that in Turkey yet. Some students travel five hundred miles to the Robert College.

The real value of each school to the work as a whole, is so dependent on the personal power and moral force of the teacher, that no general summary is very satisfactory. In one place a man with limited book learning may be a most valuable agent, and in another place of larger claims, a man with far more knowledge may be by comparison, a failure. But the schools of higher grade may be defined more accurately. Those which may fairly be called "high-schools" in the Western Turkey Mission, are located at Marsovan, Baghchejuk, Sivas, Kaiserieh and (part of the time) Constantinople. These are doing good in many ways, and especially in sowing seed that shall tell in the harvests of another century. An earnest effort is now made to reorganize the high-school at Marsovan, so that it may have the name of a college, and such a real augmentation in equipment and endowment, that it may do the work of a college.

The Robert College at Constantinople is well known ; the new Central Turkey College is also a power ; and there is a similar institution at Harpoot, in the eastern field. The theological seminaries for the special training of preachers, are located at Samokov, Marsovan, Harpoot, Marash and Mardin. Of these, only one, that at Marsovan, has been in operation continuously for twenty years. Even there, one class in two years represents the average of work, in respect to the graduates. All these seminaries have been sadly hampered in respect to the candidates, the funds at command, and the poor quality of preparation in most cases. Innumerable details might be given of the history of each separate institution, and an earnest plea made in behalf of each, for endowment, for more of apparatus, for a fuller faculty, for better dormitories, for a larger contingent fund, and above all, for more money to use in aid of students that are needy.

But, passing by all such details, we are ready for a more comprehensive question.

Has not the time arrived for the adoption of an educational system as the avowed policy of our foreign mission work?

It is not necessary to base an elaborate argument on the success of a single experiment ; we do not propose to establish any formula for the direction of the work on the structure of the Robert College. But we appeal to experience as a whole, in our own national history, and in the history of modern religious effort, in the asking of this most important question: If this be not the time for educating a force of native workers, when will that time come ?

The flower must grow on a stalk. The market must be supplied from the field. A spade is a very cheap utensil, and spades are abundant, yet a vast deal of expensive machinery was set in motion before a single spade could be manufactured.

The very phrase we have used, an educated native ministry, implies training under given conditions, it implies resources, culture. But T. W. Higginson says that we must not look for real culture till the third generation, and that judgment is confirmed in many ways. Is it not true then that a system of education must be adopted ? Is it not true that an educated class is the stalk on which our cultivated ministry may be the flower ?

If it be assumed, then, that a substantial and permanent apparatus for education ought to be provided in the fields of mission enterprise, then the question assumes a more definite form. What is to be the plan adopted ? How shall the system be so shaped that it may promptly take root ? How can we reach the best results with the least loss ? To the missionary on the spot these are no small questions. A blunder may prove a tragedy. The happy inspiration of to-day may be the genius of to-morrow, or perhaps it may be only a dream.

Those mighty marine engines that are the wonder of this mechanical age, must be built into a frame that is strong enough to bear the action of the engine, otherwise the ship would be sunk by the violence of reaction. Our moral machinery must be likewise built into a suitable frame, it must not be left to shake itself to pieces by mere jarring at unprotected points. We have

had quite enough of what was foreign thrust in by an external pressure. That is not the desideratum of the policy proposed. We would not adopt any system, but we hope to see a true and a worthy natural growth that shall eventuate in a system of which Christians may be proud. The Gospel must be the motive power; the ethics developed must be the pure biblical ethics; but there is a law of climate, of surroundings, of special adaptation, and the growth must be from the beginning in harmony with this.

In laying down a railway line in some parts of Africa it was found that wooden ties were useless, because they were eaten up in a few weeks by the white ants, abundant there. So, in other places thin iron ties would not answer because they sink readily into the mud. That which will do the work best must be determined on the ground, with all the facts in view.

The missionaries in the Turkish Empire did adopt a line of educational work long ago, and followed this for some years, until sharp criticism was provoked on the part of those who regarded this use of money as a serious error, and a misapplication of the contributions made in Christian lands for the preaching of the Gospel.

But reaction in such matters provokes discussion, and after some delay the great and noble work of training and instructing those who CAN be trained and instructed, took hold afresh, with a more firm basis of conviction than ever. It was seen that money spent on youth who do afterward preach to their countrymen, is well spent. It was seen that persons who are young and intelligent are more easily brought into line with the Gospel than those who are old and sluggish.

The fear had been expressed in the United States that the missionaries were running a great risk (to use a military metaphor) in sending their flying columns so far from the base, and the argument was that a community of devout men and women should be created first, and that the schools should grow up afterward.

But the disciples of our Lord were taught first, and the preaching of the Gospel came afterward.

It is found easier for the flying column to push on, than it is

to recall it and reopen the closed communications in the rear. It is far easier and more safe to carry on the debate that has been provoked to a conclusion, than it is to suppress and shut out debate.

What is the present aspect of the work in the Turkish Empire? What are the departments, and how do these stand related to each other?

A broad general classification of the work of the American Board in those regions gives us a triple category.

1. Supervision of the native churches.

2. Publication department.

3. Educational department.

The apostolic duty of the "care of all churches" falls on those missionaries who are stationed in the interior of the country. Much of their time is given to an actual personal visitation of these churches and to correspondence with the native pastors. In order to give a more definite form to this remark, let me state explicitly a single example. In the eastern part of the Western Turkey Mission, is the city of Sivas, the ancient Sebaste. That city is technically a "station" of the Board, that is, the residence of a missionary, or of several missionaries. Sivas was once a far more important city than it is now, both in a commercial and a moral sense. It was once an educational centre, even under Mohammedan rule, but under the present administration it is a mere relic. Yet a population of 25,000 souls affords the resident missionary an opportunity for the exercise of all his gifts. Even were it proper for him to become the local pastor and preacher, he would be loaded with care to his utmost capacity. To adopt such a course would be equivalent in many cases to an abandonment of the work in the cities and villages that are called the "out-stations." The out-stations of Sivas are scattered over a district about 150 miles from north to south, and 130 miles from east to west. Within this limit the progress of genuine evangelical religion depends, to an extent which is painful to contemplate, on the efforts put forth from Sivas as a centre. Large towns are there, to be visited occasionally, with a host of smaller places, and in these a work of grace has begun. Shall it go forward? Shall it be fostered?

Or shall we practically say to the converts, we have encouraged a hope in you that we can not now support; we have planted, but we cannot stay to water that which has sprung up? The instinctive reply of any devout soul is: never abandon such beginnings! Hence the missionary must go in person to Tokat and Niksar, on the north, to Karahissar on the north-east, and to Kurdkulak, Manjaluk, Gurun and Derendeh, on the south. He must go there often, patiently, and in a watchful spirit. This involves a laborious journey on horseback every time, because of the backward state of the country in respect to means of locomotion. But what a waste of time and effort is this! How gladly would the missionary give up his long and weary tours with the inevitable snow, mud, and discomfort, if he could only put a trustworthy sentry in each of these towns, and a real preacher, an educated pastor, in the more important of them! How gladly would the missionary discharge his episcopal functions by writing, if it were a practicable plan! But the difficulty in this department of the work, in this supervision of the churches which are of prime consequence (to say nothing of the fields just opened, having no churches yet), the difficulty is that native preachers properly qualified are sadly few in number! It has been shown abundantly that it is possible to train up such men, and to turn over the work to their hands, but the number who are ready, those who can be sent to the fields already open, they are few.

Hence, the pressing demand that comes from the evangelistic portion of the work, is for an increased working force of educated native brethren.

The second general department of the work is that of publication. In this, the supreme task, the translation and publication of the Bible, is complete. The furnishing of an unlimited supply of Bibles is now a matter of mechanical operation in the printing house, because the result of fifty years work is available in the form of electro-plates, stored in the Bible House. But the problem has other aspects. A pure literature must be provided for any people, in addition to the Scriptures; a periodic press must be maintained and a distinct taste cultivated. Such work demands workmen: such a task requires not only that

broad and comprehensive generalship which may be furnished from a foreign land, but it requires that support that can be given only when many hands are set to the same task, when there are many readers and many writers.

Try to imagine the condition of our Christian literature and periodic press in the United States, if the whole body of the clergy, both as readers and as writers, were to be subtracted. In such a case some entire departments of literature would cease to exist. The case is so plain that argument is superfluous. The pressing demand that comes from the department of publication is for an increased working force of educated native brethren.

The schools which exist of all grades, primary, high-schools, colleges, and theological training schools, are taxed to their utmost. All is done in them that circumstances permit. The teachers are full of zeal, and native youth seek admission daily.

And we are stimulated to effort by the consciousness that some of these youth are very much in earnest, determined to get an education, if they have to wait long and suffer much. Some establish schools of their own under corrupt ecclesiastical influence, as in a recent instance at Trebizond. A wealthy Armenian gentleman who had acquired property in St. Petersburg made a very considerable gift for the establishment of a school at that place, but of course under the influence of the old Armenian Church.

Some young men seek admission to Jesuit schools and a few, very few, go to remote points, as to Paris, or Heidelberg. But thus far the advantage is distinctly with the Protestants in respect to a high and worthy type of mental culture, and a still more marked advance would be welcomed with delight.

Would that we could give such an impulse to all evangelical institutions in the wide continent of Asia that their character would be recognized, and their value acknowledged. Would that they were on such a footing that all excuse would fail for seeking an education in France. And, that this can be done in the future has been shown by the achievements of the past. Pioneer work has been done: the Scriptures are now in circulation: there is a call for something fuller and deeper both in literature and education.

We live in an age of harsh and rigid cross-examination. In this day nothing is taken for granted and those very facts that are regarded as the pillars of society, the foundation-stones of life civil and religious, they too, must pass through a process of inquiry. In the line of this tendency we see each department of civilization taken up in turn, and riddled with questions, fair and unfair. The importance of education, which has been viewed as a self-evident intuition for a long time, is now challenged, and many weak points are noted in the arguments formerly employed in defence of the schools, and in defence of the methods in use. This challenge will in the long run prove an immense advantage to education, because it will compel reform, where reform is needed, and it will argue for a sober reaction, where criticism has been hasty.

But this unsettled state of things in a land of hereditary Christian privilege, ought not to suggest anything like a similar doubt in the lands which are the field of missionary operations. For the two are wide apart, and can only be compared after a careful and discriminating study. There may be an honest doubt, as to the best course for the junior class at Yale or Princeton, whether the students should read *Æschylus* or *Moliere* : but there can be no reasonable doubt as to the primary class in a village school, that all should learn to read and spell. So, it may be (we allow for argument sake), that our best plan in our own country is to hold in check the claims of the colleges, and to emphasize quite another aspect of the Gospel, and at the same time the newly organized colleges may be *the only hope for civilization and purity in Asia and Africa*. This we believe to be the fact—mainly because the future of the Gospel, in respect to preaching, depends on these institutions.

But there is a special force in the argument at this particular time. It is the golden opportunity of the Christian college in Asia, because of the posture in which the native mind is now waiting. As this last quarter of the nineteenth century is a time for caution among ourselves, so it is a time for a bold movement in the East: as the day has come for accurate testing here, so it has come for rapid building there. The friendly attitude of the masses in such countries as Syria and Asia Minor,

is a remarkable fact: and it may not be so a hundred years from this time.

In the life of Dr. Alexander Duff, a curious incident is narrated which may serve us by way of illustration in this matter of education. During a sudden deluge of the Ganges river a large number of people had taken refuge in a bungalow on rising ground, and as they stood there crowded together wondering at the volume of the waters, suddenly a fine large Bengal tiger was seen swimming swiftly through the water toward the bungalow in which they stood. All eyes watched him in wonder and alarm, as he crawled up out of the water perfectly tame to all appearance, and lay cowering in a corner of the building, trembling with fear. He did not offer the least violence to any of the occupants of that bungalow, because the tiger was thoroughly frightened by the deluge, and his fierce nature was set aside for the time being. It did seem like an outrage to shoot a poor trembling creature, in such terror, yet they did shoot him and very wisely, for just so soon as he became warm, dry, and comfortable, he would manifest again the tiger nature, that remained unaltered. This may serve us as an allegory for our argument. Ignorance and superstition go hand in hand, and a very bad combination it is. In capacity to do mischief, to harm the bodies and souls of men, this power of superstitious ignorance is a veritable tiger. But within the last forty years the Asiatic world has witnessed strange sights and listened to curious rumors. A mighty deluge of new ideas, new influences, new forces, has been at work, and the tiger is cowed for once in his life. He has fought before in the jungle, but not with this foe. He crawls up out of his old haunts, and to the surprise of all, comes running in among his traditional foes, taking shelter at their feet. It is an opportunity not to be lost. There is now a kind of vantage for evangelical education that may not be afforded again while this generation lives, possibly never. What is the argument? How can there be the slightest doubt as to the argument? The situation is before us, and it cries aloud, Kill the tiger! Open a school or college of any kind in Asia, and the students are ready: who can tell us how the case may stand a century hence?

It is not always easy to realize the significance of the most

obvious facts. Take for example the fact now mentioned, that Asiatic youth come in readily to a Christian college. Why do we say that it is so significant? Turn the case about and we may get a new impression. Let half a dozen Mohammedan Mollahs from the University El Azhar, come to Philadelphia, and buying property open a college here to give instruction in Mohammedan canon law, and in the ethics of Al Ghazali. How many students would enroll themselves in such an institution? Not one! Not only would the Mollahs be the laughing stock of the city, but they would soon find that public opinion against them was a unit! The missionaries in Turkish cities may in one sense be a laughing stock, but the public opinion of the place is not unanimous against them by any means. On the contrary, the number of those who seek an education at the hands of the foreign teachers is very large. Is it not quite conceivable that such might not be the case? may not always be the case as it is now? Are we not justified in calling the present a crisis? Is it not likely that an opportunity of such sort, neglected, will leave our work to feel the consequence for many a year, in shallows and quicksands?

No one would advocate sudden and violent changes, but the question has been raised of a permanent POLICY. It is this on which stress is laid. Is there any way in which a hundred dollars can be better spent for the conversion of the world than in the education of a native preacher? Is there any other way in which the money can do half so much in that direction?

Special importance attaches to this subject of inquiry at the present time because noble efforts are being made now, in different parts of the Ottoman Empire, in the direction indicated, viz.: the organizing and endowing of institutions for collegiate and theological education. It is not a new subject, but a new zeal is manifested by the native brethren to a degree that involves serious self-denial on their part.

A beginning was made many years ago, but this is a cause that cannot rest in beginnings: it must move: it must gain or lose: there must be continually higher education provided, or else a distinct falling off in tone will follow. We find sometimes a line of argument which involves a distinct logical climax, a con-

clusion that is inevitable. It is so in this case. It is impossible to present biblical thought to any people without setting the gates of the Temple of Learning ajar: and with these gates ajar, what is the outcome? Shall we discourage those who would enter? or shall we throw the gates wide open?

In conclusion two remarks are suggested:

I. College life is favorable to the progress of the Gospel.

This is only saying that intelligence is a blessing. So it is: but many suppose the facts to prove the contrary in that peculiar organization we call a college. This is a mistake based on the manifest disproportion of things as given to the public in the newspapers. A case of disorder is reported in full, and set before five million readers, while not a word is said of the attendance at the daily prayer-meeting held in the same college.

Let any one examine the annals of our own American colleges with reference to the revivals that have taken place in them, the conversions, the spiritual awakenings, and then compare the record of a village in civil life with an equal number of inhabitants, and the advantage will be seen plainly to be on the side of intellectual pursuits. If we compare two young men, one in college and one in civil life, we find that, other things being equal, the student is the more attentive, more thoughtful, more susceptible, of the two. This is a result of his steady cultivation of the faculties, paying *attention* year after year to his instructors. But is it not reasonable to suppose that this same power of attention (which in a high state of development passes for genius) will tell on a soul when the Gospel is preached?

As a matter of fact it does so tell on young men even when they come from Christian homes. But there is a special force to this argument in such lands as India and Asia Minor, because there the Christian school or college will be the only possible substitute for a devout home training. There is a terrible lack in Asia of all those blessings that are the harvest of a hereditary Christian culture, and the demand is made by a multitude of hungry souls that some system shall be devised that may at least in a measure make up this sad deficiency. How can we better bring about the result sought than by a proper and

moderate collegiate system of education? Is not this the strategic base for all our future work in the East?

2. The plan suggested is natural to the mind of the Orientals.

Among all the eastern nations there is a marked tendency to combine the educational and religious work. The distinction of affairs secular and affairs ecclesiastical, so sharply defined with us, is vague and shadowy in Asia, for many reasons. In some minds such a distinction seems scarcely to exist at all. All who come under Mohammedan influence in any way must feel the result of Mohammedan conceptions of life. To the orthodox Muslim there is theoretically only one kind of illumination: only one code of morals inside the mosque, or out of it. There are some of them so degraded in mind that they are incapable of any such discrimination as we habitually make on such subjects. Against the great bulk of the people I bring no such charge, but the drift of centuries has been to sweep along all things in a single current. So, too, in the nominally Christian churches of the empire, it has been the custom to select the Bishops from among the monks, because in the monasteries only was the requisite training to be had. What is the practical result in this present case? The result is that the great majority of the population in the Turkish Empire to-day regard schools as such in the generic sense as the proper vehicles of religious effort.

In view of the facts thus stated, and in view of many more at which we can only hint; in view of the nature of the opposition, and the extent of the welcome given to our work in the Turkish Empire, in view of this temporary fright of the tiger, and the tame way in which he is now lying within reach of his traditional enemies, what is the duty of the American Churches? Would that all were agreed as to duty! Would that a united front could be presented to the foe! Yet under the limitations of our actual state it is possible to concentrate on this work of training up a body of native preachers, qualified, self-reliant, and aggressive.

Is there not here an opportunity to practice that great principle so justly stated by Daniel Webster?

“If we work upon immortal minds, if we imbue them with principles, with the just fear of God, and love of our fellow-men,

we engrave on those tablets something which will brighten to all eternity."

REV. EDWARD RIGGS, Professor in the College at Marsovan, Asia Minor, added the following remarks:

Eighteen hundred years ago faithful Christian missionaries were laboring in Asia Minor for the spread of the Gospel and the establishment of the Christian Church. They were at first met with coldness and neglect, but gradually interest was aroused. Converts were gathered about these patient, humble teachers, churches were organized, persecution meekly endured and overcome, and at length so rapidly did the work progress that within three hundred years Christianity was acknowledged as the prevalent religion and was adopted by the state. No one can doubt the genuineness of the work, and the fruits of the Spirit became widely manifest in the community. And yet any one who has studied the modern history of that region knows well how little is left of that noble apostolic Christianity—how *sadly* little even in the body still called by the Christian name. With a flush of shame the Christian student asks, Why this decadence? Is there not in our blessed religion a self-perpetuating power? Can it so easily die out, like a system of human speculation or a particular style of architecture? Perhaps an answer may be proposed laying the blame of this apparent failure of Christianity upon the great Mohammedan invasion, which swept everything before it with the dire alternative of the Koran or the sword! Nothing can diminish a feather's weight from the awful responsibility which rests upon those blind, fanatical interpreters of a false faith, but it must be confessed that this fearful irruption was rather the consequence than the cause of the decay of Christianity. Had the Christianity of the middle ages been what we know it ought to have been, the wide-spread triumph of Moslemism would have been an impossibility. Had the spirit of Paul and Timothy, of Polycarp and the Gregories been the prevailing tone of the Christianity of Asia Minor from the eleventh century to the fifteenth, no anti-Christian power could have crushed it to the ground.

The question comes then most solemnly to the Christian laborer in this age of missions—Is that which we are now seeking to build or rebuild to be swept away again by a new wave of decay and corruption? Will the time soon come when the East must again send missionaries to enlighten the West, and then having lighted a second time the western torch, will it die down again to be but a flickering light in the socket? And so must day and night forever chase each other around our moral globe, bringing no brighter day—no shorter night? The thoughtful Christian's answer is a confident, triumphant negative!

There is an essential and fundamental difference in the elements of the problem which enables us most confidently to believe that the pall of darkness which is now being drawn back will never again overspread those interesting lands with its thick shade. The all-important characteristic of modern evangelical Christianity is an *open Bible in the hands of every individual*, and a degree of *education sufficient* to make the Word of God independently intelligible. In the days of early Christianity the Bible was known and read, and there was a degree of education. But both these privileges were confined to a minority. Books were exceedingly rare, and independent individual investigation was an impossibility to the mass of believers. The same era which broke the death-like spell of mediævalism and opened a new continent for the development of a free Christianity gave also to humanity the priceless boon of *printing*, which was destined to be the right hand of literature and education. Thorough mental discipline for the masses of mankind becomes not merely a possibility but the self-defence and perpetuating power of spiritual Christianity. A knowledge of algebra or syntax will not save the soul or renovate the life, but spiritual Christianity, permeated and moulded by that intelligence which is born of liberal education, gains a balance and inherent power for work and growth which destined it to resist the corrupting power of infidelity and of superstition, and to conquer its way to an absolute supremacy over the human race.

Hence any system of evangelization which fails to give a generous place to education must fail substantially of those permanent and exalted results at which every such system aims.

This truth has been but partially realized in the evangelistic efforts of the Church hitherto, and should be the guiding principle in her policy in the future. Experience shows clearly the absolute necessity of thus advancing the facilities for education, *pari passu* with those for direct evangelization. And now that the attention of the Christian world is being drawn to it, it is to be hoped that there may never be a step of return to the horrible doctrine that ignorance is the mother of devotion.

The evangelistic work in Asia Minor has set its face steadily in the right direction. A galaxy of illuminating points now bespangle her map, and it may confidently be hoped that their rays may go on ever extending and multiplying, till not a shred of the old darkness remains. Youngest and in some respects most promising among these rising lights is Anatolia College, in Marsovan. This town has a fine location in northern central Asia Minor, most admirably adapted to be a centre of influence for a vast population of Armenians and Greeks, among whom this institution has already a high reputation. And its organization is such that it will be equally available for the still greater Turkish population whenever the good day shall come in God's providence for an opportunity for Christian effort among that strange and interesting people. This institution is now appealing to the friends of Christian progress for the means needed in its important work. The poverty of the people in that region makes it impossible for them to complete the endowment of such an institution. They have made a noble self-denying effort, but it must be supplemented by liberal gifts from those on this side the ocean, to whom Providence has entrusted so much larger means.

THE GAINS AND LOSSES OF FAITH FROM SCIENCE.

[A Lecture delivered before the Summer School of Christian Philosophy,
22d July, 1881.]

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WE find it convenient to speak of the conflicts of science and religion; the language covers for us a very important and a very conspicuous fact. And yet it remains true that there can be no conflict between science and religion except as one or the other or both are misconceived. So far as they each pertain to facts and are facts, they must be in harmony as parts of one structure.

We would open a discussion on the Gains and Losses of Faith from Science, with a most thorough and thankful recognition of the great accessions to human life that have accompanied the growth of science. Science is a disclosure of a part of the kingdom of God. It is ancillary to natural theology, and has wonderfully broadened our spiritual horizon. There is no more discussion to be had as to the fitness and benefit of science than in reference to the fitness and benefit of light. Where then is the opportunity for conflicts and losses in its relation to religion?

There are two occasions of confusion and mistake in harmonizing knowledge; two reasons which lead us to speak of conflict between its different parts. We identify science and religion with our conceptions of them respectively. We have no absolute standard of either. There is, therefore, as neither is completely understood, an opportunity for conflict between them. The normal result of this discrepancy is a correction

and enlargement of our knowledge in one or both directions. This form of modification will fall more to religion than to science, as science has been the result of more recent, searching, and cautious inquiry; as religion in its completeness has grown up in many obscure ways through many dark centuries. The force of reason is greater in science; the force of historic growth is greater in religion.

It is a grand and God-given labor which has fallen to us to recognize freely these two sources of knowledge, and to unite them in a comprehensive and harmonious survey of human life. Examples of the questions which lie for reconstruction between science and religion, as departments of knowledge arranged about distinct centres, are the method of God's government in the world, its natural and supernatural elements, the conditions on which the progress of his kingdom is hinging. These and kindred inquiries which stretch into both realms of thought, the physical and the spiritual, will long receive modified answers as our knowledge enlarges. We have now no more to say of this first reason of conflict, that both science and religion are narrow and imperfect in their conceptions. They are to find reconciliation, as all departments of truth find it, by growth.

The second ground of confusion arises from the changeable meaning of the words we use, and from the fact that we give a force to them in one meaning which belongs to them only in a much narrower meaning. We are thus attributing an absolutism to science which does indeed attach to it in its primary statements and narrow significance, but does not at all belong to it in that broad colloquial meaning in which it is constantly used in discussions which pertain to faith. If we were to understand by science, empirical knowledge of the material world; by psychology, empirical knowledge of mind; by religion, empirical knowledge of the facts of spiritual life; and by philosophy, the reconciliation of these three forms of experience by appropriate ideas covering them all, we should find comparatively little opportunity for any conflict between the facts of these several sorts which make up our lives. The disagreements and destructive criticisms almost all appear in the region which we have termed philosophy—the region which lies back of science, back of psychology, back of religion, the supersensible region of the

freest thought, where the mind is struggling after the highest unity in its rational life. Science suggests its philosophical solutions of the universe; psychology, its solutions; and religion, in turn, its solutions. These wide-ranging explanations, as drawn respectively from one third of the field to be covered, immediately fall into conflict with each other. Now if we insist that these suggestions of science in the realm of philosophy have something of the same authority that belongs to its empirical facts, we can easily bring them to bear in a destructive way on the accepted facts of psychology and religion. Each attacking army pitches its camp and marshals its forces in the region of philosophy, and thence invades the territory of its rival. This warfare is incident to an insufficient philosophy, a philosophy that does not accept freely all the facts of empirical science, empirical psychology, empirical religion, and harmonize them in one comprehensive view. This difficulty can only be overcome by a higher and sounder philosophy, and constitutes the great incentive to such a philosophy.

Here again, however, science has an advantage. Its facts are more numerous and more verifiable than those of psychology; more immediate and persistent than those of religion; in a sense more manifest than either, and better and more generally understood. Scientific thought thus acquires an easy assumption and unperceived egotism that readily overawes less reflective minds. In this conflict, never to be deprecated, and not to be extinguished save by rising to a higher level of truth, psychology needs more carefully to analyze and confirm its facts, and still more is this true of religion, whose experiences are so changeable, so various, and so widely scattered through the whole realm of history. Fundamental as religious truth is in human society, it flickers before the eye, and human life must be carefully and discriminately searched for its ultimate and undeniable elements. For this reason it is that practical religion, in bringing vividly to the vision of men the very facts under discussion, is so often the correction of theoretical unbelief.

Our present philosophical difficulties, in this last and largest reconciliation of truth, are found in the circumstance that we have not the three classes of facts, those of matter, those of

mind, those of spiritual life, in their distinct character and full force before us. One form of experience has spread over the surface, like oil over water, and given to the whole its own shimmering and colored reflection. The remedy is broader and better facts in these departments; wider and wiser philosophy in their reconciliation.

In behalf of clearness of thought, we have made first this presentation of the grounds of the existing conflict and of its ultimate solution. We now turn more directly to our present purpose, a statement of the gains and losses of faith.

An obvious advantage to faith arising from the great achievements of science is the improved civilization in which we now play our part. These advanced conditions of life multiply moral forces, give solidity and breadth to moral questions, and make the minds of men more generally and more intensely sensitive to spiritual and *quasi*-spiritual influences. The intellectual atmosphere we breathe is far more mobile, has in it more of the ozone of spiritual truth, than any the world has hitherto held. This is sufficiently plain in our poetry. Our poets do not merely love nature, they love it by virtue of a searching, analytical, and spiritual sense they bring to it. However little they may be able to give to the heart the final words of solution and consolation, they are constantly raising the deep questions of life. They no longer go tripping on, like Pope, along well-worn moral aphorisms, as if their only office was to blow one more roundelay on a familiar horn. Grant that we have put more queries than we can answer, we have put them, and that is the first step; and we have put them because society is awake in a wonderful degree to them, is accustomed to great things, and knows not from what quarter new things and great things may now come to it. This enlarged and active arena of life is worth everything to life, your life and my life, and so ultimately to that impressible and powerful life with which God is to take full possession of the world.

A second gain is our greatly increased sense of law. A complicated and far-reaching plan has necessarily to an untrained mind the appearance of confusion. The range of order in the world and the principles which control it are too profound to be entirely obvious. Difficulties and objections under the gov-

ernment of God lie everywhere on the surface, and are not to be removed except by a broad and penetrating view of first principles. Natural theology was for a long time a mere gleaner in the field of wisdom, finding here and there nice adaptations in things dead or things living which seemed to express divine forethought and oversight. Modern science has altered the face of the world. It traces everywhere general laws of order, which branch out into the most extended and remote adaptations. The ideas of plan and relation have become universal. There is no dead material in the world; nothing which is simply passive or negative; all is active, constructive, harmonious. Science from this point of view is nothing less than the thought of God breaking from its concealments of expression, and becoming visible and audible on every side of us. Science is the omnipresence of his wisdom. The light is no longer a faint percolation through clouds. It parts the clouds before it. This sense of an absolutely pervasive plan and purpose is of infinite worth to men's thoughts. The manifest intellectual elevation of our century is due largely to it. We have held to our lips for two hundred years intoxicating draughts of knowledge. We are only waiting to be sobered by equal gifts of wisdom and grace.

Out of this sense of universal law, there springs at once a feeling on our part of immense reserved powers. Where law is, there we can follow and make use of its provisions. The world is put into our hands by its laws, and it ceases to be dead to us as it has ceased to be dead to Infinite Reason. It pulses everywhere with the life of reason, is subject to reason, and we share that reason. There is something spiritually startling to us in the successes of our inventions. We speak into a wooden ear, and miles away the muffled voice offers itself to a human ear. Is this framework, this soil and rock, as permeable to suitable agencies as the body of man to the touch of mind?

Power, universal, inexhaustible power, goes with this universal, inexhaustible plan, and we are co-workers with God everywhere; not merely when we sow our fields and commit the harvest to his care, but when we build our shops, travel our roads, frame our laws, and lay the foundations of physical, intellectual, and spiritual life for our posterity. God is with us

everywhere, extending and prospering our labor in the exact degree in which we bring to it wisdom and virtue.

I need now hardly say that the one idea always growing under this regimen is that of responsibility, and responsibility is the germ of spiritual life. Spiritual life rests on the sense of power, and power is found in this growth of knowledge. Thus our power is so expanded that the living tree does not so appropriate the soil, the sunlight, and the shower, as we the world above us and about us. This truly rendered into the language of the New Jerusalem is the omnipresence of our gracious heavenly Father whom we love, in whom we live and move and have our being.

We are brought by these universal facts of law, unfolding themselves progressively in evolution, in contact with the world in a new way. It is not only capable of redemption, it is being redeemed, and the questions put us are, What will we do to further the work? and What part will we have in it? An idea that has haunted religion, and one that has a figurative basis in a passing form of truth, has been that the world is an ally of the devil, and that men are to be redeemed out of it, rather than to be redeemed with it. This idea slowly transforms itself into its true expression under the facts of science. The great physical and moral movement in the world is disclosed, our part in it is laid out for us, and we already see that, without any descent from heaven with a conquering host, Christ is to reign on the earth with a fulness hardly dreamed of by those who first caught prophetic sight of the fact. We are thus led to shape our lives daily to an orderly work of salvation, to the infinite advancement of the present and of the future. Just here especially do we better understand the divine method. We have regarded the wish and the will of God as the child regards his own wishes and will, as things that may act instantly and impulsively with slight reference to means. We have sought reverently to recognize a divine will of this same child-like order, and prayerfully to lay hold of it, and so to build up a kingdom with slight foundations in our own character and actions. The facts of science, the facts of the world as God has made it, exclude every such idea. They disclose an intellectual world firmly built on and into a physical world, and a spiritual world

resting on both and towering over both. The will of God runs with the reason of God, and so must our will. Will is not bursting of bonds; it is the forging of bonds, only they are the bonds of wisdom and grace; it is not the overthrow of law, it is the enthronement of law. We shall by and by cease to antagonize the will of God to the ways of God, or look upon mere will as the pivotal point of revolution. True will is the personal efficiency which runs along the lines of reason. In the degree in which the world gains by this sense of Divine Presence do our lives gain in hopefulness and usefulness.

Another distorted sentiment in religion has been that God is exalted in the proportion in which man is debased, and that there is some sort of antithesis between the two. This impression is one of the early illusions of sin, and has signification in a region of mirage. As man gathers into his own spirit the true currents of life and hope, he understands that these are in some very full and proper sense the immediate gifts of God, and that in the very degree in which he has power is he in the image of God, a partaker in his life, and able to enter into his honor. The idea of fervent fellowship displaces that of fearful prostrations, and that too with no loss of humility, for is he not cradled on an illimitable ocean of power, and is he not consciously coming under the shadow of the truly great and sublime?

It matters not that these higher spiritual states are not yet fully realized as the fruits of science, but that states are often fallen into which are quite the reverse of them. This is a common fact in spiritual architecture as in all architecture. A wall may be run up which stands strangely alone and shows ragged sides. We must wait till the work grows proportionately, till every surface has been treated, and face answers to face in a finished whole. It may be that these roughest parts will then bear the best delineations of art. Where now we have only the foolish pride of opinion, we may at length have the most perfect reflection of the divine thought.

But here we come to what is the more obvious fact in our time, that science has brought serious losses and injuries to faith: that our accustomed highways are obstructed by building material; that our feet stumble on the fragments that

lie about. These illusions of thought are real, not imaginary, and are to be ascribed partially to the giddy minds that hold the science of the world, and partly to the fearful ones that hold the religion of the world. It has been interesting to observe how the notion of fixed, inflexible law which science has offered has united with the notion of arbitrary will which religion has offered, and how the two have ensphered themselves like coalescing drops around one centre. In a union of this sort the religious idea is likely to be the bastard one and lose its position. The fixed will of God, his election when it sinks into a natural law, disappears as will altogether. There have been these semi-physical conceptions hovering about the spiritual world that have prepared the way for this sudden invasion of science. They will affiliate with these new friends, and ultimately be driven out with them.

But the real secret of our present difficulty is the tendency of the human mind to extreme and uncompensated movements, its rhythmical advance by alternate excesses. No productive power or principle is arrested among men till it has exhausted itself in all allied errors. One idea tyrannizes to-day over the intellectual world; it is that of law, under the narrow type of physical law. The methods of physical inquiry and its conceptions are all-prevailing, though the physical world is not more than half of the ensphered universe, and the lower half at that.

This revolution of the world in favor of one idea, and its bitter reign over us, is, like a French Revolution in secular history, a fact of the first order in the intellectual history of the world. While its gains are immense, its evils also are very great, and they ultimately expend themselves on faith. This revolution is a revolution in favor of matter as opposed to mind, as holding and defining the productive forces of the world. It is quite immaterial that Spencer, or any philosopher, declines to pronounce in behalf either of matter or of mind as the ultimate existence, the laws of mind are made to assume the same necessary and fixed character as those of the physical world; and the task is definitely set as the goal of science to explain the entire facts of the intellectual and moral world in terms of matter and motion. Law is made universal, and necessity is

associated with law. Hence that kind of fixedness and fatality which belong to simply physical facts come creeping over all facts, as mists of the low lands rise and spread over the hills. The immense stretch of the physical world, its unmeasured antecedence to the appearance of mind in man, become the impressive and oppressive terms both for thought and imagination, and the idea seems preposterous that these fag-ends of results should have any other or any higher law than the things that have brought them forth. Yes, matter and motion have been from eternity, and man's acts, individually and socially, must be translated into these expressions before their true genesis and true value can be seen. Hence we have a cosmic philosophy, a philosophy of the universe, man appearing in but one act of this great drama, and in this act not so much in completion of its plot as in its simple continuation.

This is the first loss occasioned by the new, the empirical, the cosmic philosophy in its relations to faith. Between matter and man, in the fundamental character of the laws involved, there ceases to be any difference. The laws of life, the laws of thought, the laws of conduct, the laws of society, all rest back on physical laws, and are pervaded by these primary impulses. Intelligence, thought, liberty, duty, are transformed into the latest products of the soil. This fatalistic and fatal metamorphosis would be much more startling than it is, were it not that men do not more than half understand it. The language of the old philosophy is retained, and carries with it in a glimmering way the impressions of previous convictions. Desire, thought, will, choice, are all named, and are supposed to stand for their proper selves, whereas not even the ghosts of these notions are covered by the words as used in this philosophy.

Notwithstanding the great apparent lucidity of Spencer, I venture to affirm that very few books in our language are more obscure and misleading than those of his philosophy. If its conclusions could be stripped of the illusions of language, could be stated boldly and baldly in strict terms of matter and motion, they would be rejected at once. The empirical philosophy involves throughout a subtle play of imagination by which physical images are brought to the explanation of spiritual things, without covering the very substance of the facts in

volved, and without venturing to put physical connections consistently and fully in place of these facts. What men take to be cosmic philosophy is simply a shadow of physical relations cast on a background of personal, spiritual ideas, and blended with them in infinite confusion. The result is that the powers of mind are greatly weakened and obscured, though we may not discover that they have suffered a total eclipse.

With this first loss to faith comes a second. If the force of reason is reduced in man, it is correspondingly reduced in the universe. If man is a product of the soil, if his mental operations are to be expressed in an equation whose reduction leaves on one side only known terms of matter and motion, then the Infinite Reason comes under the same treatment as does its type, the finite reason. The ultimate formula of the universe is expressible in terms of matter and motion, and whatever the power of personification can do for these ideas can be done for a Divine Being, and nothing more. And there is truly nothing more surprising than this latent force of the personal, spiritual element in the mind of men as expressed by these very powers of personification. No sooner has a philosophy removed all rational foundations of faith, got down to the bed-rock of physical facts, reached the ultimate elements in the universe, the wood and the stone of construction scattered everywhere, than, by way of consoling itself and its disciples, it lets loose these powers of personification, and forthwith there begins to rise in the background Infinite Force, the Unknown, the Inscrutable Power, the Not-ourselves-that-makes-for-righteousness, and before we are fairly aware of it, out of these ashes of reason, there has arisen a shadowy semblance of Deity to evoke once more the reverence and call forth the faith of men. In proportion as men have done their spiritual nature violence in sinking, do they seem to delight to give play to its buoyancy as it begins to rise again. There is a good deal of cosmic philosophy that starts with a wise, derisive, cynical smile, and ends with closed eyes and an anthem. We do not wish to criticise the anthem, we only remark it as the last flash of light in the socket in which the beaten oil of the sanctuary has been consumed. Consistency is all we wish in cosmic philosophy. If it were thoroughly consistent, it would quickly destroy itself.

With the loss of a clear sense of a Pervasive Presence of reason in the universe, there begins to pass away, as a matter of course, the conviction of immortality. If the supreme reason does not embrace conscious personality, but finds only obscure expression in matter, we have no right to expect that finite reason, gaining consciousness for a moment under a favorable conjunction of physical conditions, will be able to retain it when these have been swept away. Our promises of immortality arise from the likeness of our reason to the Supreme Reason, the fellowship of our reason with the Supreme Reason, and when these terms are cut down to the co-ordination of physical laws, we must go back to the physical world if we would ask any questions in reference to the future, and this world makes answer in the quick corruption of the grave.

Here again the most remarkable fact which this philosophy presents is the great difficulty it finds in grubbing all spiritual roots out of the soil. No sooner has an immortality of the individual been lost than a sort of immortality of the race is brought forward to take its place. We shall not live; others will live; let us exalt their lives. A noble impulse this, one more sporadic shoot from our mutilated spiritual nature; but it cannot take the place of the entire plant. A continuity of mortal beings is not immortality; it is rather an endless procession of the dying. It is the word, death, drawn out and emphasized to the last letter. No matter how successful we may be in improving individual life and the collective life, this improvement brings no redemption. We are simply selecting the fairest of our youth for Minotaur. We are making the contrast between life and death each year more horrible. Because life is more to be coveted, it is taken not the less quickly from us. No, the improvability of the race is not the real remedy of mortality. What a George Eliot really finds, what she truly prizes, is the love of man wrapped up in her own spirit. Alas! that a napkin holding such a talent should be hidden in the earth.

So the synthesis of humanity which Frederic Harrison preaches with the enthusiasm of a prophet is but an after-thought. It is the second commandment rescued when the first has perished. Such devices are a melancholy stirring of

the embers that the sparks may once more fly heavenward. It is a discouraging effort still to urge a good action when the immediate motives for doing it have been lost. John Morley's summation of a true spiritual attitude is an admirable one. In speaking of Burke, he says: "We could only wish that the years had brought to him what it ought to be the fervent prayer of us all to find at the close of the long struggle with ourselves and with circumstance—a disposition to happiness, a composed spirit to which time has made things clear, an unrebellious temper, and hopes undimmed for mankind."

But such a result can only be realized when we feel to the full the force of spiritual life, and the life in us making answer to the higher life in the universe about us. We admire the skill and we honor the virtue with which these men and like men hold fast the inheritance of the race after they have cancelled its title-deeds, but we do not believe less certainly that there is involved in this method ultimate bankruptcy.

The philosophy which lies back of physical science strives to build a spiritual kingdom on foundations far too narrow to sustain it, and out of materials far too coarse and unsubstantial to receive its labor. It has, therefore, resulted in the steady debasement of the very conception of spiritual life. What is the remedy of the evil? We believe it to be a broader and sounder philosophy, a philosophy that covers not only the facts of the physical world, but those of mind and religion also. An obstacle to this philosophy, in addition to that of an exaggerated scientific temper, is a false religious temper which will not appeal to reason, nor freely accept the decisions of reason. Reason is distrusted as if it were not the central gift of God, as if it were in some way in league with science, opposed to faith, and ready to waste the fruits of revelation. What the eye is to light, that is reason to the truth. If we can truly charge any system with irrationality, that system must give way; if we can affirm of any statement it is rational, that statement must gain ground in our thoughts. We have two sets of gifts, the powers of comprehension which God has bestowed upon us, and the things to be comprehended—the revelations of one order or another which he has made to these powers. The revelation cannot contradict the power or go be-

yond it. The power is the first, the most fundamental gift. God is nowhere more present to us than in a thorough use of our powers. It is by them and under them that all progress is to be made. When religion disparages these powers, or robs them of any portion of their office, it does it to the endangerment of all healthy growth.

But the devout mind will say that this assertion is made in oversight of the office of the Holy Spirit; that we are to look to this Spirit as the ultimate remedy of unbelief. Herein an obscure antagonism is allowed to spring up between the natural and the supernatural, between reason and faith, between God's action in us and his action beyond us. One of the very things which science should help us to correct is the tendency to conflict at this point. Let us not by any means lose the supernatural, but let us not in any way oppose it to the natural, or supersede the natural by it. It is this proclivity in religion to cast itself blindly on the supernatural which has offered a weak point to the attacks of science. The Holy Spirit is most present when men's thoughts are most active and most just. We have no more reason to suppose that it is any part of the office of the Holy Spirit to override reason than it is its office to obscure the eyes or close the ears. That much which has been ascribed to the Holy Spirit has had an effect of this sort in it is undeniable, but this portion has not been the pure gold, but the alloy. It is this very alloy which has made so many moral movements so partial a benefit. Will any one venture to say that in the degree in which the Spirit of Truth is present, the truth itself will not be seen and understood? What, I pray, is a profound understanding of spiritual truth but the most divine insight? And is not this an insight to be reached and sustained by the most thorough and the most guarded effort? Humility is rightly insisted on, not because it is the humbling of our thoughts, but because humility is wise and helps to lift our thoughts. We need all native power, all diligence of inquiry, every method of instruction, and the utmost purity of spirit as the conditions of a sound philosophy which shall disclose broadly the ways of God, ways that lie along the heavens like beams of light, and are not to be fumbled after in darkness.

In securing this philosophy we need a clear, careful, bold

statement of the facts of mind and the facts of religion, made on their own basis, under their own form of experience, and held fast to as being at least as plain, as primitive, and as worthy of belief as any facts whatever. It is because this empirical philosophy, so called, has in its interpretations destroyed the first facts of experience in the realm of mind that that realm seems just ready to be submerged, like a sinking island, under the waters of oblivion. Nothing is plainer, and nothing can be made plainer, than that mind thinks, and that thought is obedience to the laws of truth, and that this obedience includes a clear perception of the truth and a free following after it. Forget these first principles, make this movement a necessary physical fact, and thought itself disappears, and with it should sink at least this philosophy of systematized degradation. The world is full of vital facts and intellectual facts and moral facts and religious facts, which can only be explained by a cosmic philosophy by being explained away as illusions. But they are not illusions. If any portion of the world in which we move should be discarded,—and no portion of it should be so discarded,—it is the sweet and the sour, the hot and the cold, the hard and the soft, the still and the loud, the red and the green, of our physical experience, which exist neither here nor there, neither in things nor in organs nor in the mind, but as a changeable set of impressions sustained by all these, as light dances on the surface of a stream in motion. Settle back to the first facts, the *empirical* facts, that we think, that we love, that we plan; let these facts carry with them what they include in any rational apprehension of them, and henceforth the entire invading army of physical conception is routed, and left to pitch its tents on its own arid plains once more.

In this way shall we reach both a natural and a supernatural, and see how firmly and how quietly one lies above the other, as the heavens above the earth. These two terms expound each other. For all purposes of comprehension or use we lose one in losing the other. The natural includes all that whose nature is defined under fixed forces and fixed laws; all that is immobile save as it glides on in the grooves prepared for it, obedient to properties and energies already present to it. A type of the natural, though the natural is far more comprehensive than the

image may seem to imply, is a machine already in revolution under measured forces that have been applied to it. Now what is this physical, this natural world, broad as it is, capable of by itself? It can fulfil its own circuits, and that is all. It cannot comprehend itself, unless comprehension is a revolution of one of its own wheels; it cannot use itself; it cannot direct itself. It remains simply a fact of complex motion, but a dead fact none the less.

We bring to the natural a supernatural. And by a supernatural we understand all powers whose laws give limits, but not lines, of action, whose putting-forth involves changeable adaptations, a spontaneous impulse fitting itself actively to exigencies. Pure thought is the type, thought that carries forward a logical process from within itself toward the truth. The supernatural so understood, in order that it may do anything, bring forth any permanent fact from its own movements, must be put in connection with the natural. This natural immediately it can comprehend, can direct, shape, and use. The two assume instant and complete significance in reference to each other. The natural is firm within itself, simply that the supernatural may lay hold of it, work upon it, work with it, and so record itself by means of it. The supernatural has, on the other hand, freedom within itself, as the essential condition of all thought, use, power. Between the two, the natural and the supernatural, the rational universe is constructed. All that is fixed is fixed for a purpose, and all that is flexible is flexible under a purpose. Knowledge proceeds, use proceeds, conduct proceeds, character proceeds, yet none of them are determinate and none are evanescent. There is change without instability, and stability without fatality. In other words, there is exactly what we find, a moral universe.

Looking now more narrowly, we shall readily see the part played by Revelation. The eye purged to the point of prophetic vision, the will uttering a mandate that goes beyond the nerves of the body and forces its miraculous way among physical things, as if these, too, were organized into obedient, vital connections, are after all in full sympathy with the supernatural in the world, itself lying everywhere above and about the natural, like an atmosphere. The miraculous is but a disclosure of

the supernatural beyond its ordinary limits. We are taught by it that these limits are only passing conditions of order, and may be contracted or expanded under new exigencies. Oxidation may proceed slowly, with little heat and no light; or it may break out suddenly in intense heat and brilliant light. The miraculous is only the supernatural energies of mind in unwonted action.

It is of the highest moment that we understand that the foundations are the natural; that the supernatural is the superstructure built on these foundations; that Revelation is but gilded stars and crucifixes and spheres crowning tower and turret here and there. Science is helping us to this apprehension, not to the loss of the supernatural, but to a far more profound comprehension of both it and the natural. The great mistake of religion has been the separation which it has placed between the two, and its easy way of supplanting the one by the other. Its slips in theory and practice have arisen here. It has been said by a distinguished historan that the clergy have too often shown profound indifference to morality when called on to choose between justice and the interests of religion. The explanation is plain. They have antagonized the two, when they are not to be antagonized. A supernatural that is not every moment finding its way into a natural is of no import; a natural that is not every moment reaching up to a supernatural is of no service. The natural and the supernatural are, like the body and spirit of man, inseparable parts of one experience to be treated collectively without the loss of either.

It is to this synthesis that we are reaching forward, suffering for a moment under a quackery of physical nostrums and physical training simply.

VIEWS AND REVIEWS.

CHRISTIAN THOUGHT CIRCLES.

AT the late Summer School of Philosophy it was suggested that reading circles be formed to create and to increase interest in the department of study cultivated by the American Institute of Christian Philosophy. Each member of the Institute and each subscriber to *CHRISTIAN THOUGHT* might invite a few friends, men and women, to meet weekly or monthly, without much formal organization, to read and discuss at each session some paper published in *CHRISTIAN THOUGHT*, the paper to be selected by the leader of the company. In New York, where the Institute's meeting is held on the first Thursday evening of each month, it would seem probable that those who take interest in the subject would naturally come. Strangers are cordially invited to these meetings, which are held in the parlor of the Chapel of the Church of the Strangers, 4 Winthrop Place, near Eighth St., a block from the New York Hotel. We doubt whether other circles could be formed in the city; and yet it is quite possible that those who live in distant parts of the city might find it practicable. In schools and colleges, in distant cities and in villages, the plan, which was suggested by a practical man, would seem to be quite practicable. The three volumes of *CHRISTIAN THOUGHT* already bound, as well as the current volume, furnish a repertory of papers of which Vice-Chancellor MacCracken, in his inaugural address as Professor of Philosophy in the University of New York, said, "I have met here in this immediate vicinity the Institute of Christian Philosophy, presided over by a member of the Council of the University. *The lectures and magazines it gives each year are themselves almost a faculty of graduate philosophy for the whole country.*" Perhaps this high estimate by a most competent

judge contained the hint for the suggestion of "Christian Thought Circles." Certainly, as we look over the titles of the articles already published—each of which, of course, we think worthy of careful examination—we could easily select two courses of twelve papers each which would be at once very instructive and very entertaining. A friend suggests these: 1. Darwin, Emerson and the Bible, by Dr. Jesse B. Thomas, of Brooklyn; 2. Beauty, by Prof. Peabody, of Harvard University; 3. Leading Theories of Inspiration, by Dr. Erret, of Cincinnati; 4. Concessions of Distinguished Unbelievers, by Dean Tillett, of Vanderbilt University; 5. Am I Free? by Prof. Noah K. Davis, of the University of Virginia; 6. Great Believers, by Charles S. Stockton, M.D., of Newark, N. J.; 7. A Half Hour with the Evolutionists, by Abram Coles, M.D., LL.D.; 8. Ethics and Religion, by Pres. Hyde, of Bowdoin College; 9. Kant and Lotze: 1785-1885; by Vice-Chancellor MacCracken; 10. Music as a Revelation of God and Christianity, by Dr. Theodore T. Munger; 11. The Relations of Art and Morality, by Dr. Washington Gladden; 12. Jesus Christ, as the Representative Redeemer, in the Light of Modern Science. Well, certainly, that is a most inviting bill of fare. We have taken the list and marked another series of twelve quite equal in our judgment to the series above selected, prepared by such men as Dr. Lyman Abbott, President Porter, President Bascom, Dr. E. F. Burr, the late Professor Martin, Rev. Dr. W. H. Platt, Professor Patton, of Princeton, Professor Welch, of Auburn, Professor Edward J. Hamilton, Rt. Rev. Bishop Harris, of Michigan, Dr. George D. Armstrong, of Virginia, and Professor Ballard, of Lafayette College. Beyond these two series, we have marked another twelve, which we would indorse for excellence; and then the list would not be exhausted. (On application we will send the entire list to any address.) Beyond the bound volumes are the numbers of the current volume, which we think have not been surpassed by their predecessors. Now, if friends will make the experiment of forming and conducting *Christian Thought Circles*, we shall be glad to aid them by any means at our command, and we shall be greatly obliged by reports of any experiments in this good work, especially by reports of discussions of any of the papers.

A COURSE OF READING IN PHILOSOPHY.

Repeated applications have been made for advice as to a course of study which might be pursued by men and women who, being engaged in practical life, are desirous of occupying a portion of their time in acquiring a knowledge of philosophy. The Institute of Christian Philosophy, having had this matter under advisement and taken counsel of several of the most distinguished teachers of philosophy and authors of philosophical works, has prepared a practicable course of study which will occupy probably two years.

It has further been determined that those who take this course shall be assisted from time to time by letter, in reply to their inquiries, so that if there be a real need for it a Correspondence School of Philosophy may become one of the Institute's instrumentalities for accomplishing its ends. The work of replying to these letters will be committed to a distinguished professor of philosophy whose name will be a guarantee of thoroughness.

And, still further, that a certificate of proficiency will be given to those who show competent knowledge of the first section and more marked distinction to those who, at the close of the second section shall be able to pass a satisfactory examination.

A full statement of the whole plan, course of study, mode of examination, distinctions, etc., will be sent upon application to the address of any one inclosing fifty cents to Mr. Charles M. Davis, Secretary, 4 Winthrop Place, New York. This announcement may at least show whether or not there be a sufficient demand for this enterprise to enlarge and perpetuate it.

The Institute solicits correspondence on this subject, suggestions from practical persons and students. The desire of the officers of the Institute is to make this new department really useful, to show, what is true, that the Institute is not for recluses and students of high thought alone, but for *the people*, meeting their wants, stimulating their desires and learning from them what are the lines of thinking along which able thinkers should be invited to think. Philosophy in this day must come down from the Porch and the Academy and "go about" with the Christ "doing good."

EMPEDOCLES AND MODERN MATERIALISM. BY W. C.
CAHALL, M.D., PHILADELPHIA.

One of the most striking and picturesque characters of that noble line of Greek philosophers, was Empedocles, a native of Agrigentum in Sicily, where he flourished from about 490 to 430 B.C.

Mythical and shrouded in uncertainty as many of the details of his life are, there still remains much, sufficiently trustworthy to make him a most remarkable figure. Born of an eminent family, he naturally participated in public affairs, but it was not alone as a statesman that he was so widely known, but he was distinguished as a poet, physicist, physician, prophet and reformer. As a statesman and reformer he advocated free institutions and opposed the encroachments of tyrants; as a poet he composed some grand but obscure hexameters, which so pleased Lucretius; as a physicist and physician he made the marshes around Selinus salubrious and healthful, devised a method of assuaging the winds which caused such havoc to the harvests of Agrigentum, and he is reported to have restored to life a woman who had long lain in a death-like trance. He was a man far in advance of his time, and many of his acts and predictions, now easily accounted for, appeared to have impressed his contemporaries with an idea of supernatural power.

It appears that he fostered this belief in his divinity, for it was his custom to walk forth among the people clad in purple robes and a golden girdle, with brazen sandals on his feet, and his long hair bound by a delphic garland, and followed by a retinue of slaves.

One of the traditions (probably apocryphal) of his death informs us that Empedocles, after a feast given in his honor, cast himself into the crater of Etna, in the hope that as no vestiges of his remains would ever be discovered, he would be thereafter worshipped as divine; but that the volcano belched forth again his brazen slippers, and thus defeated his designs.

It is particularly his philosophical doctrines to which the writer at this time wishes to call attention, as they furnish us with an example of most unparalleled prescience and premonition of future discovery.

That his doctrines were at entire variance with those of his contemporaries and predecessors, and that laws of nature and means and methods of investigation, which are now common property were then scarcely dreamed of, make his deductions all the more startling, if correct. And it shall be the purpose of this paper to prove that many of the proudest achievements of modern science were foreshadowed and anticipated by this strange philosopher two thousand years ago.

First. The first important divergence of Empedocles from the notions of his time was that he taught that all things arose, not by a transformation of one primitive form of matter, but by various combinations of permanent elements; that the elements are continually being combined and separated by the two forces love and hate, which are identical with the physical forces of attraction and repulsion. Here is the first germ of chemistry, for chemistry as a science, could not be, until the elemental structure of nature was demonstrated, and all the laws of chemical combination and decomposition depend upon the inherent mutual attraction and repulsion of atoms. As defined by Brande, "Chemistry teaches us of the properties of elementary substances, and of their mutual combinations; it inquires into the laws which effect, and into the powers which preside over their union; it examines the proportions in which they combine, and the modes of separating them when combined."

Second. James Sully ("Evolution," Encyclopædia Britannica), observes "that his (Empedocles') hypothesis of a primitive compact mass (*sphærus*), in which love (attraction) is supreme, has some curious points of similarity to and contrast with, that notion of a primitive nebulous matter with which the modern doctrine of cosmic evolution usually sets out."

Third. Again we find him declaring that no new thing or power does come or can come into being, but that the only change that can take place is a change in the juxtaposition of element with element, and the new properties are but the sum of the preceding ones. The theory of the conservation of forces, which was but vaguely known to Newton, seems here to have been anticipated, in part at least.

Prof. Clerk Maxwell thus defines the principle of the conservation of forces: "The total energy of any body or system of bodies is a quantity which can neither be increased nor diminished by any mutual action of those bodies, though it may be transformed into any one of the forms of which energy is susceptible." ("Energy," *Encyclopædia Britannica*.)

"Broadly enunciated," says Prof. Tyndall, "the principle of the conservation of force asserts that the quantity of force in the universe is as unalterable as the quantity of matter; that it is alike impossible to create force and to annihilate it." ("Fragments of Science," p. 21.)

Fourth. Empedocles taught an evolution which the most advanced materialist of to-day should be satisfied with. Starting with that primitive mass where love (attraction) reigned supreme, he describes a subsequent stage where love (attraction) and hate (repulsion) become more active in their oppositions, and, through successive aggregations and segregations of the elements, brought about the formation of the earth and sea, of the sun and moon, and of the atmosphere.

Nor does he place the limit to the powers of the elements here, but boldly proceeds to follow his elements through their combinations and re-combinations up to,

Fifth. The spontaneous generation of life, which Empedocles stoutly maintained.

That these views of Empedocles upon the question of evolution and spontaneous origin of life, are concurred in by modern materialistic evolutionists will be readily seen from quotations from their foremost thinkers.

"For the explanation of the genesis of the solar system, Mr. Spencer makes use of the nebular hypothesis in the formation of our planet, as well as the development of organic and mental life." "Mr. Spencer seeks to show that the causes of evolution are involved in the ultimate laws of matter, force and motion, among which he gives great prominence to the modern doctrine of the conservation of energy." "Mr. Spencer thus approaches the earliest theories of cosmic evolution when he tells us ('First Principles,' p. 482) that vast periods in which the forces of attraction prevail over those of repulsion, alternate with other vast

periods in which the reverse relation holds." (James Sully, "Evolution," *Encyclopædia Britannica*.)

The following quotations are from the writings of Prof. Tyndall: "Nor did thought halt there, but wandered on through molten worlds to that nebulous haze which philosophers have regarded, and with good reason, as the proximate source of all material things. I tried to look at this universal cloud, containing within itself the prediction of all that has since occurred; I tried to imagine it as the seat of those forces whose action was to issue in solar and stellar systems, and all that they involve. Did the thought which now ran back to it simply return to its primeval home?" ("Fragments of Science," p. 123.) "The matter of the animal is that of inorganic nature. There is no substance in the animal tissues which is not derived from the rocks, the water and the air. Are the forces of organic matter, then, different in kind from those of inorganic matter? The philosophy of the present day negatives the question. Every portion of every animal body may be reduced to purely inorganic matter. A perfect reversal of this process of reduction would carry us from the inorganic to the organic, and such a reversal is at least conceivable. The tendency, indeed, of modern science is to break down the wall of partition between organic and inorganic, and to reduce both to the operation of forces which are the same in kind, but whose combinations differ in complexity" (*Ibid.*, p. 414). "Supposing, then, the molecules of the human body, instead of replacing others, and thus renewing a pre-existing form, to be gathered first-hand from nature and put together in the same relative positions as those which they occupy in the body; that they have the self-same forces and distribution of forces, the self-same motions and distributions of motions—would this organized concourse of molecules stand before us as a sentient, thinking being? There seems no valid reason to believe that it would not. Or, supposing a planet carved from the sun, and set spinning round the axis, and revolving round the sun at a distance from him equal to that of our earth, would one of the consequences of its refrigeration be the development of organic forms? I lean to the affirmative" (*Ibid.*, p. 415).

Sixth. Having thus spanned that chasm, at which so many

scientists balk, between the inorganic and the organic, by the explanation that life was the product of blind chance, through a fortuitous swirl of elements, it was an easy task to evolve the plants and animals, and through animals, man, from the primary living organism. And what were the directing forces, to which he attributed this evolution of life?

Seventh. *Natural selection.*

Thus do we find that, what is considered one of the most important contributions to philosophy in the nineteenth century, the famous Darwinian theory of natural selection, is but an echo of that enigmatic man, whom Etna swallowed twenty centuries ago.

With one of those flashes of genius, which we ordinary mortals can but pause and wonder at, he clearly saw the unity of nature, that plant, animal and man were alike composed of the same elements, only in different proportion, and by a chain of reasoning, often crude and unscientific in itself, announced that principle, which Spencer so aptly defined as "The survival of the fittest."

Consistent to his theory to the end, he considered sensation consciousness, and the faculties of the mind dependent upon the constitution of the body, so that one's moral conceptions vary with the nature of the food he takes into his stomach, and that men, after all, are but "creatures of fire and children of the sun."

Parallel doctrines can readily be quoted from modern writers.

"Therefore I should infer from analogy that probably all the organic beings which have ever lived on this earth have descended from some one primordial form—and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been and are being evolved (chap. xiv.). Slow though the process of selection may be, if feeble man can do much by his powers of artificial selection, I can see no limit to the amount of change, to the beauty and infinite complexity of the co-adaptations between all organic beings, one with another and with their physical conditions of life, which may be affected in the long course of time by nature's power of selection (chap. iv.).

Under nature, the slightest difference of structure or constitution may well turn the nicely balanced scale in the struggle for life, and so be preserved (chap. iv.). But if variations useful to any organic being do occur, assuredly individuals thus characterized will have the best chance of being preserved in the struggle for life; and from the strong principle of inheritance they will tend to produce offspring similarly characterized. This principle of preservation I have called, for the sake of brevity, natural selection" (chap. v.). (Darwin in "Origin of Species.")

"For what are the core and essence of this hypothesis (natural selection)? Strip it naked and you stand face to face with the notion that not alone the more ignoble forms of animalcular or animal life, not alone the more noble forms of the horse and lion, not alone the exquisite and wonderful mechanism of the human body, but that the human mind itself—emotion, intellect, will and all their phenomena—were once latent in a fiery cloud." (Prof. Tyndall in "Fragments of Science," p. 159.)

A recapitulation of the doctrines of Empedocles which have been developed by modern thinkers, may include the notion of the elemental structure of nature, upon which chemistry is built; a conception of the modern nebular hypothesis; a distinct declaration of the principles which underlie the theory of conservation of energy; his teaching the unity of nature; a marvellous approach to the latest materialistic doctrine of evolution; the belief in spontaneous generation of life; and that evolution proceeded through natural selection.

Some of these doctrines have been accepted by scientists of every shade of opinion, whilst the others are held by the ultra-materialistic class alone.

It is not the purpose of this sketch to defend or attack these materialistic and atheistic dogmas, for this can wisely be entrusted to other and abler hands, but simply to record the fact that many of the most important contributions to philosophy during the present century, the promulgation and elaboration of which have rendered some names well-nigh imperishable, found expression through that purple-robed and garlanded being whose brazen sandals clinked against the stones in the streets of Agrigentum a century before Aristotle appeared in Athens.

THE REV. DR. MUNGER ON "EVOLUTION AND THE FAITH."*

With the interest which fine writing always excites, enhanced by my personal friendship for the author, I have read Dr. Munger's "Evolution and Faith" in the May number of *The Century*.

It has intensified my conviction that we shall not be able to make very satisfactory progress in the discussion of this subject until thinkers and writers shall somehow contrive to agree upon definitions. So long as we continue either to make one word carry two meanings, or to employ two words to signify the same thing, we shall be in confusion. I can see how an intelligent man would both agree and disagree with Dr. Munger's article, taken in its totality. Its one defect is that he uses two words indiscriminately. In one place he does this so distinctly as to be marked; it is where he closes a sentence with these words: "One law or method, namely, that of development or evolution"; and that way of thinking and writing diminishes the value of his brilliant article. He is not solitary in this, but instances might be drawn from many writers showing this same confusion of thought.

Why is it not possible to separate "development" and "evolution" so as to have no confusion in the use of the words? Professor Huxley ("Critiques and Addresses") says that the fundamental proposition of evolution is "that the whole world, living and not living, is the result of the mutual interaction, according to definite laws, of the forces possessed by the molecules on which the primitive nebulosity of the universe was based." To him the leading evolutionists, such as Tyndall and Haeckel, give agreement. Why should we not all agree? Then we should confine "evolution" to the hypothesis which means that matter has the promise and potency of all things; that matter is first, and that all things proceed out of matter without any intervention *ab extra*; that the forces are in the molecules; that they act and interact on themselves, and that they have always done so, and will always do so, so long as they continue to be the basis of matter. If we could all agree to this, the advantage would be that it would leave us free to give "development" another mean-

* This and Dr. Munger's reply are copied from the *Century Magazine* for September, 1885.

ing, a meaning which might include a process by which matter passed from a homogeneous into a heterogeneous condition, under the supervision of the intellect which devised the law in the beginning and continues to operate that law until now. Would not this be a real gain to our philosophical and scientific literature?

I call attention to the following passage in Dr. Munger's article, as showing the embarrassments under which writers labor so long as "development" and "evolution" are considered interchangeable terms: "I grant that these fears would be well grounded if certain theories of evolution were to be accepted as settled—such as the theory that matter has within itself the potentiality of all terrestrial life, and goes on in its development alone, and by its own energy; a theory that may stand for the various mechanical and atomic doctrines that deify force and dispense with cause." But that *is* "evolution"; that is the definition of evolution given by the most conspicuous scientific men on that side of the question; and we are surprised to hear the doctor say: "This theory is now an outcast in the world of thought." Does the *Encyclopædia Britannica* agree with this? Do the writings of the scientific gentlemen named above agree with this?

Take another passage: "When evolution is regarded, not as a self-working engine—an inexorable and unsupervised system, a mysterious section of creation assumed to be the whole—but rather as a process whose laws are the methods of God's action, and whose force is the steady play of God's will throughout matter, there need be no fear lest man and religion be swallowed up in matter and brute life." Yes; but that is *not* "evolution." Evolution *is* "an inexorable and unsupervised system, a mysterious section of creation assumed to be the whole"; but "development" may be a "process whose laws are the methods of God's action," etc.

Why should we not settle upon that distinction, and not bracket the words, or tie them together? Does it not lead to great confusion of thought? Is it not confounding genus and species? If not that, is it not confounding two species? For instance, if process were genus, might not evolution and development be

species included in that genus? Evolution could stand for the process that has no creator nor supervisor, and development for the process which is carried forward by one who is both creator and supervisor. Also, "evolution" could continue to stand for that hypothesis for which it now stands, namely, the product of mind by matter; and "development" could stand for what Dr. Munger sometimes calls evolution, namely, the product of matter from mind in a process which had a person who is both the creator and the supervisor.

Dr. Munger would have found great advantage if he had given his paper the title of "Development and the Faith"; for evolution, according to its own accredited apostles—and we have no right to steal their thunder—is a process in which there are no pauses, no laps, and no breaks. According to "evolution," in the beginning was matter; according to "development," in the beginning was mind. According to evolution, there must be abiogenesis: the organic must spring from the inorganic; the living must spring from the non-living. I am not now saying whether this hypothesis be true or false; if it be true, we shall certainly discover spontaneous generation, and until spontaneous generation be discovered, whether true or false, it is not scientific to take this hypothesis as settled scientific doctrine. I do not now say that the other theory, that of development, is true or false; that remains to be shown; but its reception among thinkers certainly seems to be growing, and Dr. Munger has amply and ably shown that some forms of it may be held without at all endangering the faith. But it must be borne in mind that what he has shown as not endangering the faith is *not* "evolution," if evolutionists are to be allowed to define the name which they give to their own hypothesis, and it would seem that they are certainly entitled to this privilege.

With all the pleasantness of personal regard, I must say that my friend in his article reminded me of Milton's description of the lion coming from the earth, which Mr. Huxley ridiculed in his New York lectures:

"Now half appear'd
The tawny lion, pawing to get free
His hinder parts."

Towards the end Dr. Munger says: "I have attempted merely to show that the Christian faith is not endangered by evolution, and to separate it from a narrow school of thought with which it is usually associated," etc. Plainly he cannot pull out; evolution belongs to the school of thought with which it is usually associated. If we baptize our child into the name of our neighbor's child, it will not make the babies one, nay, it will not even make them twins; they are separate things. Dr. Munger may call a certain school of thought "narrow," but evolution belongs to the school of thought with which it is usually associated. And then immediately after, in laying down categorically the lines upon which future study should be pursued, the first line is: "The respects in which evolution as a necessary process in the natural and brute worlds does not wholly apply to man." Now just so far as any process in the natural world does not apply to man, so far forth it is *not* "evolution," and we ought not to call it "evolution," because it produces confusion of thought by making confusion of terms.

Throughout his whole article, wherever Dr. Munger has held to "the faith," he has been compelled to reject "evolution." If he had simply stated what evolutionists hold to be evolution in the first paragraph of his article, and then stated the development theory as held by other scientific men, he would have increased the value of his brilliant article. My simple contention is that when there are two theories before us, the *terminus a quo* of one being matter, and the *terminus ad quem* of the other being matter, we shall not talk of two trains, both running, but running in opposite directions, as if they were one and the same train.

Charles F. Deems.

REPLY TO THE REV. DR. DEEMS.

I am grateful to my friend Dr. Deems for the very courteous terms in which he comments upon what he regards as an unwise confusion of the terms "evolution" and "development." The points he raises did not escape me while writing the article, and I considered the reasons he so well states, but reached a

different conclusion. I trust Dr. Deems will not consider the brevity of my reply as indicating that I think the point unimportant or not ably defended.

My main reason for using the word "evolution" where Dr. Deems would say "development" is that I do not consider it wise to yield the word to the school that first brought it into general use and put its own definition upon it. It is not a trademark; it is not private property; and I must so far disagree with my friend as to think that it has not been so exclusively used by one school, and in so exclusive a sense, that it cannot properly be used by other schools. It is too valuable a word to be so surrendered. It has already passed into literature and common speech as a general phrase, and it is now too late to limit it to a certain hypothesis, even if it were desirable. It seems to me wiser to use it in its general sense, and not as an exact term, and to contend under it for the definitions we hold to be true. I grant the inconvenience of using terms that are not precise, but the contention between the two schools is not one that will be much helped or hindered by mere words. It is not the first time that opposing schools have fought under the same banner. The Church of Rome has as good a claim to the word "Catholic" as the Huxley school has to the word "evolution"; but the Protestant refuses to yield it to the Romanist, because the word itself has inestimable value and power. On exactly the same ground I deemed it wiser to use the word "evolution" and put into it what seemed to me its proper meaning, just as the Protestant insists on using the word "catholic" despite opposition and occasional misapprehension. In other words, I believe we can win a place in common speech *for theistic evolution*, and that phrase is worth contending for.

T. T. Munger.

THE SUMMER SCHOOL OF 1886.

THE *Ninth Summer School* of the Institute was held in Sylvan Grove, the grounds of the Seaside Assembly, Key-East, New Jersey. The Assembly had just closed its sessions of more than two weeks, and generously offered its grounds and tents for the use of the School.

The first meeting, Tuesday evening, August 17th, was a reception of the members and friends of the Institute, and was largely attended, as were all the sessions. Scripture was read and prayer offered by C. R. Blackall, M.D., Superintendent of the Seaside Assembly. Rev. Dr. S. Vernon, of Philadelphia, welcomed the School to Key-East. Dr. Deems briefly stated the origin, history and aims of the Institute, the members of which do not claim to know everything, or much about anything, but only wish to be philosophers in the true sense of that word —lovers of wisdom, seekers after truth. Cheering words were spoken by many others.

On Wednesday, August 18th, at 11.30 A.M., the devotional services were conducted by the President, Rev. Dr. Charles F. Deems. The regular paper of the day was by Professor Benjamin C. Blodgett, of Smith College, Northampton, Mass. His subject was, "The Mission of Music to Mind and Heart." In the afternoon the lecture and subject were discussed by Prof. Ransom B. Welch, of Auburn, N. Y.; Dr. C. R. Blackall, of Philadelphia; Hon. A. B. Conger, of New York; Prof. W. D. Wilson, of Cornell University; Mrs. Blackall; Mrs. Caroline E. McGuire, of Trenton, N. J.; Rev. Dr. James W. Lowber, of Paducah, Ky., and Rev. Dr. Hathaway, of Jersey City.

Thursday, August 19th. In the absence of the President, Prof. R. B. Welch presided, the devotional exercises being conducted by Rev. George D. Armstrong, D.D., of Norfolk, Va. The regular paper of the day was by Prof. W. D. Wilson, D.D., LL.D., of Cornell University, Ithaca, N. Y., whose subject was, "The Origin of our Moral and Religious Ideas." The discussion in the afternoon was conducted by Dr. Lowber, Prof. Welch, Mr. Conger, Rev. J. H. Johnson, of Detroit, Mich., Mr. Gisby, President Robert Fairbairn, of St. Stephen's College, Annandale, N.

Y., and Rev. Dr. J. E. Rankin, of Orange Valley, N. J. A telegram from Prof. Francis E. Patton, of Princeton, N. J., announced that sudden illness would prevent him from attending next day. Dr. Fairbairn, who was appointed to present a paper on Saturday, accepted an invitation to read it next morning.

Friday, August 20th. The devotional exercises were conducted by Rev. Dr. Wightman, of Baltimore, Md. In the absence of Dr. Patton, Pres. Fairbairn read a paper on "Capital and Labor." This was discussed in the afternoon by Prof. Wilson, Mr. William G. Moody, of New York, Dr. Blackall, Mr. Stephen H. Wilder, of New York, Dr. Lowber, Mr. Conger and Dr. Deems.

Saturday, August 21st. Scripture was read and prayer offered by Rev. Dr. C. F. Dripps, of Philadelphia. The President read a letter from Rt. Rev. Henry C. Potter, D.D., of New York, on "The Labor Question." Mr. William G. Moody, of New York, read a paper on the same subject. The afternoon found a large and eager company ready to speak on this absorbing subject; it was discussed by Dr. Lowber, Prof. Welch, Dr. Armstrong, Dr. Hathaway, Mr. Marion J. Verdery, of New York, Rev. H. L. Hastings, of Boston, and Mrs. M. Helen Crane, of Asbury Park.

The sermon to the School on Sunday morning was by President Deems. In the afternoon, Rev. H. L. Hastings, of Boston, Mass., publisher of the Anti-Infidel Library, addressed the School on "The Mistakes of Moses."

Monday, August 23d. The devotional exercises were led by Rev. Dr. James Morrow, of Philadelphia. The regular paper of the day was by Prof. Borden P. Bowne, of Boston University, Mass. His subject was "Logic and Life." This was discussed at the afternoon session by Professors Welch and Wilson, Dr. Deems and Mr. Conger.

Tuesday, August 24th. Rev. Mr. Kelley, of Middletown, Ct., conducted the devotional services. The regular paper of the day was by Rev. Dr. J. E. Rankin, of Orange Valley, N. J., on "The Function of Christian Doctrine." The President appointed as members of the Committee to nominate officers at the annual meeting to be held Wednesday afternoon, Rev. Dr. J. E. Rankin, of Orange Valley, N. J., Rev. Dr. James Morrow, of Philadelphia, and Mr. Edward Batchelor, of Key-East.

In the afternoon, the morning's subject was discussed by Rev. Drs. Dripps, Morrow, Welch and Deems, and Mr. Conger.

Wednesday, August 25th. Rev. James W. Lee, of Atlanta, Georgia, conducted the devotional exercises. The regular lecture of the day was by Prof. Ransom B. Welch, D.D., LL.D., of Auburn, N. Y., whose subject was, "Accord Between Philosophy and Faith."

The Annual Meeting, in the afternoon, was opened with prayer by Rev. Dr. Howard Henderson, of New York. The Annual Address was delivered by Prof. Welch.

In the absence of the Treasurer the financial report was made by the auditing Committee through their chairman, Hon. A. B. Conger, of New York. It was as follows:

"The Committee to which was referred the books and statement of accounts of the Treasurer of the Institute for the year ending June 30th, last, report, that they have carefully examined the same, and have found them correct in every particular.

"For the purpose of exhibiting the care and wise economy pursued by the officers and Executive Committee of the Institute in the administration of its fiscal affairs, they have summarized the receipts and disbursements as regularly classified by the Executive Committee and Treasurer, and state the same as follows:

"The amounts credited by the Treasurer are

| | | |
|---|---------|------------|
| For balance in the Treasury on July 1st, 1885, | • • • • | \$50 93 |
| Donations and collections, | • • • • | 1,292 09 |
| Fees of Membership, | • • • • | 1,179 21 |
| Total receipts for the year ending June 30th, 1886, | • • • • | \$2,522 23 |

"The amount of expenditures as classified to

July 1st, 1886:

| | | |
|---|---------|------------|
| For Summer Schools, | • • • • | \$1,016 15 |
| Supplying CHRISTIAN THOUGHT to members, | • • • • | 940 40 |
| Clerical services, etc., | • • • • | 360 79 |
| Postage, | • • • • | 108 85 |
| Sundries, | • • • • | 42 67 |
| Annual Sermon (in the winter), | • • • • | 10 60 |
| | ————— | \$2,479 46 |

Cash in Treasury,

"Respectfully submitted.

\$42 77

"A. B. CONGER,
"EDWARD BATCHELOR."

The report was accepted and the Committee discharged.

The Committee on Nominations reported through their chairman, Rev. Dr. Morrow. Their report was accepted, the Committee discharged, and Mr. Joseph A. Hallock, of Newark, N. J., was directed by a vote of the Institute to cast a ballot for officers. The following officers were elected:

President : Charles F. Deems, D.D., LL.D.

Vice-Presidents : Connecticut, Noah Porter, D.D., LL.D.

Delaware, Hon. Thomas F. Bayard, Secretary of State, U. S.

Georgia, Patrick H. Mell, D.D., LL.D.

Illinois, Rev. Bishop Charles E. Cheney, LL.D.

Kentucky, Ormund Beatty, LL.D.

Maine, Wm. DeWitt Hyde, D.D.

Maryland, Edward J. Drinkhouse, M.D., D.D.

Massachusetts, Mark Hopkins, D.D., LL.D.

Michigan, Alexander Winchell, LL.D.

Mississippi, Rt. Rev. Wm. M. Green, D.D., LL.D.

Missouri, Rev. Bishop Eugene R. Hendrix, D.D.

New Brunswick (Canada), James R. Inch, LL.D.

New Jersey, Francis L. Patton, D.D.

New York, Ransom B. Welch, D.D., LL.D.

North Carolina, Hon. Kemp P. Battle, LL.D.

Nova Scotia (Canada), Rev. William Ainley.

Ohio, Rt. Rev. Gregory T. Bedell, D.D.

Pennsylvania, William C. Cattell, D.D., LL.D.

South Carolina, Gilbert R. Brackett, D.D.

Tennessee, Rev. Bishop Holland N. McTyeire, D.D.

Vermont, Rev. Samuel W. Dike, A.B.

Virginia, Gen. G. W. Custis Lee.

Wisconsin, John Bascom, D.D., LL.D.

Trustees : Mr. Cornelius Vanderbilt,

Mr. William O. McDowell,

Gen. Clinton B. Fisk,

Mr. Owen O. Schimmel,

Mr. John H. Osborne.

Secretary : Mr. Charles M. Davis, 4 Winthrop Place, New York.

Treasurer : Mr. William Harman Brown, 64 Broadway, New York.

On motion of Hon. A. B. Conger, it was

Resolved, That the sincerest acknowledgments of the Institute, be and the same are hereby gratefully tendered to the ladies, its members and friends who have given so uniformly their presence at its meetings, and especially to those who have graced its tented hall with floral decorations of such exquisite taste.

On motion by Prof. Ransom B. Welch, seconded by the Secretary, the following resolutions in memory of Sylvester Willard, M.D., who died at Auburn, N. Y., Friday, March 12th, 1886, were passed unanimously by a rising vote of the members:

Resolved, That the American Institute of Christian Philosophy has heard, with profound sadness and regret, the news of the decease, since our last anniversary, of Sylvester Willard, M.D., of Auburn, N. Y., a member of the Board of Trustees.

Resolved, That as an Institute of Christian Philosophy, we would recognize the noble Christian character of this honored officer, and his loyal devotion and generosity toward the Institute.

Resolved, That this memorial of sincere respect for our deceased Trustee be duly placed on the records of the American Institute of Christian Philosophy; and that an official copy thereof be transmitted to the family of the deceased as a token of our sympathy and regard.

The Rev. Dr. Howard Henderson announced the death on the 17th of August, of James W. Dodd, LL.D., late Professor in Vanderbilt University, and a member of the Institute. Eulogistic remarks on the character and the attainments of the deceased were made by Dr. Henderson and the President.

On Thursday, August 26th, the last day of the Summer School, the devotional exercises were led by the President, Dr. Deems. The regular paper of the day was by Rev. James W. Lee, of Atlanta, Georgia, whose subject was, "The Conservation of Spiritual Force."

After religious exercises appropriate to the occasion and conducted by the President, the school adjourned.

"ABOUT BOOKS."—In type, notices of "Our Country," Dr. Leighton's "Gospel Commended to Common Sense," "Royal Gallery of Poetry and Art," Jevon's "History of Greek Literature," etc. They are crowded over to next number.

CHRISTIAN THOUGHT.

THE ORIGIN OF MORAL AND RELIGIOUS IDEAS,
WITH SPECIAL REFERENCE TO MODERN AGNOS-
TICISM AND IDEALISM.

[A Lecture delivered before the American Institute of Christian Philosophy, 19th August, 1886.]

By REV. W. D. WILSON, D.D., LL.D., Cornell University.

WE are met here for an earnest religious purpose. It is no less than the presentation of Christian Thought, and a vindication of the ground on which we profess to hold it, with special reference to the Metaphysical Questions of the day. It is my misfortune that my subject is not one that can be made interesting to the mass of mankind. They do not study Philosophy. But, nevertheless, they gladly avail themselves of the assumptions and the sayings of men who claim to be regarded as philosophers, as a justification for pursuing the course that their tastes, their interests, their inclinations—or perhaps even their lust and grosser feelings, incline them to follow. We cannot, of course, hope to reach such persons by any discussions of the questions of Philosophy that we have here. But we must meet these questions somewhere. We must stop the current from which they flow, if we can ; and although the subject cannot be made popular or widely interesting, nevertheless it must be treated by somebody ; and it may perhaps be done as well by one who cannot very satisfactorily do anything else.

In this discussion, we use language that we have derived from the common theory of Knowledge, which regards knowledge as a collective whole, made up of ideas of things, just as the universe is a whole made up of the things themselves.

The ideas are considered as being *in the mind*, and as representing there, not only all the objects that exist in nature, so far as we have cognized them, or thought of them, but also the endless creations of fancy—factitious ideas of Descartes, “that may have occupied our thoughts.”

Now, just as the objects in the material Universe—*innumerable* and *endless* in variety as they are—are, nevertheless, made up of a very few elements, some sixty-four or five, I believe, so those ideas of things which are supposed to be in the mind, are really made up of comparatively few elements. Thus “whiteness” is one such element; “hardness” is another. But whiteness and hardness are properties of *innumerable* objects about us, as common as properties of objects, as oxygen, iron, sulphur and hydrogen are as chemical elements. And the same, with proper modifications, may be said of all the elementary ideas of which the complex ideas of things are composed.

The origin, nature and extent of human knowledge, have been the subject of inquiry and interest ever since the beginnings of human speculation. In the fourth century B.C. Plato proposed his famous theory of knowledge, as consisting of ideas in the mind, put there by the Creator of man before his birth into this world. In 1641 Descartes began a new era in speculative Philosophy. He thought that a part of our ideas are derived by cognition from the objects in the external world. And in 1690 Locke published his “Essay on Human Understanding” in which he denied the reality of innate ideas altogether, and taught that all the elements or “matter” of them are derived by experience or actual cognition; a part of them by sense-perception from material objects around us; the other part by consciousness, or as he called it, “the perception of the operations of our own mind within us.” To the first source he ascribed such ideas as those we have of “yellow, white, heat, cold, hard, bitter, sweet, and all other things which we call sensible qualities.” And to the latter source he assigned such ideas as we have of “perception, thinking, doubting, believing, knowing, willing, and all the different actings of our minds.” (Essay B. II., chap. i., §§ 2-6.)

Here are clearly two classes or categories of ideas—the one

representing material objects, and the other representing mind and spiritual objects.

But the fundamental principle underlying the whole is that we have no elementary ideas, and can get no ideas, *except by actual cognition of the substantial object or reality*, whether mind or body, whose properties are actually represented by those ideas.

Locke himself, though very confident in asserting his theory, does not seem to have very fully seen and appreciated its scope, and, like most of his followers, he omitted or rather neglected to make full use of the class of ideas derived by consciousness from the mind itself.

But I think that Locke was right; and I think, too, that if he had seen its full scope and all the consequences of his fundamental principles, and had made the use of them which his undertaking called for, or for which, at least, it afforded an opportunity, the course of speculation in modern Europe, from that time onward, would have been entirely different from what it has been. We should not have had the "idealism" of Berkeley, the "scepticism" of Hume or the "agnosticism" of our modern scientists.

In Germany, too, Philosophy would have taken quite a different course. Kant would have seen no reason to deny our knowledge of "things in themselves," nor would he have seen "antinomies" and contradictions underlying all our knowledge. Fichte would have seen no reason to doubt the substantial existence of things, and the world would never have seen the vexatious paradoxes of Hegel or the sickening pessimism of Schopenhauer.

The agnostics thus neglect, as Locke himself had done, or fail to recognize and use the elementary ideas of Locke's second class. And they sometimes ignore, and sometimes accept, his fundamental position that all our ideas of each class are obtained by cognition—one or the other as it pleases them—for they are fond of using Kant's doctrine that we know phenomena only and not reality at all.

The idealists neglect his fundamental principle altogether. Hence they fail to see any resemblance between ideas and external objects or any certainty of the reality of external

things—think it has never been proved and never can be—acknowledge no difference between false perceptions and true, the objects we dream of and those we see when awake, and see no necessity for recognizing the mind as the organ or agent of thought, that by which we think and are persons, and by which alone God Himself can be a person.

In 1785, Dr. Thomas Ried, of Scotland, seeing the sceptical tendencies of Locke's theory as it had been accepted and applied in England and Scotland, began a movement with a view to counteract them. He denied the reality of ideas in the mind. But he thought there must be some elements of knowledge that had not been derived from sensation. He does not say definitely what they are. But they do not belong to Locke's second class—derived from the consciousness of the mind itself—its own acts and states. ("Essays on the Intellectual Powers," Ess. II., chap. iv., § 2.)

The views thus inaugurated and vindicated by Ried and the Scotch School are now, and have been for some time past, as I think, the prevailing views among English-speaking people. But latterly there has been a strong disposition—and I think it is gaining among us—to accept or rather *infuse* a modified and diluted form of Hegelism into the teachings of the Scotch School, and this, too, as I think, with no distinct comprehension of its real bearing or tendency. It pleases the fancy, and seems to afford a way of escape, and the only one that is seen to offer itself, from the harder, harsher and more repulsive features of the agnosticism that *seems* to come from Locke's system.

In 1829 Victor Cousin took up the subject, having in view also the general development of idealism, and attempted to show more definitely what was the nature of these *a priori* ideas, as he called them, or elements of knowledge, which could not be derived from sensation. And from that time onward to the present day it has been customary for philosophers who are not inclined to accept the materialism and agnosticism that have been derived from "Locke's System," have seemed to think it necessary to recognize some form of *innate*—or *a priori*—ideas.

But the recognition of *innate*, *a priori*, or *intuitive* ideas, in

any form, if we mean to include elementary ideas, is liable to many serious objections; and is regarded by philosophers of the agnostic school, as but a subterfuge and convenient way of escape from the conclusions that are inevitable from any system that recognizes sense-perception alone as the origin and source of ideas—the only avenues of knowledge.

We have then agnosticism if we disregard Locke's fundamental principle and take the first class of ideas only; and knowledge, if we will use the word strictly and properly, is limited to visible objects and the material world. It takes away all the sanctions from morality and all sense of obligation from religion. Worship is but a weakness and positive dogmatic teaching is but a form of priesthood; the outward yoke of a usurping hierarchy. (Tyn-dall's "Fragments of Science," second edition, p. 351.)

While on the other hand, denying this principle, as do the Hegelians, we have a system of idealism that recognizes, indeed, the moral and religious *sentiments*, and allows, in fact rather encourages, the profession of Christian doctrines and the use of the language in which such doctrines are professed; but it undermines the sense of reality for substantial things and tends to resolve miracles and even the miracle of our Lord's resurrection into mere myths—leaving the form of the Faith while taking away the power thereof. Well, the form is good—though not the best. It is the testimony which semblance always bears to substantial value.

It is not my intention, on this occasion, to attempt to prove that there are no innate or *a priori* ideas; but rather to show that we need not resort to such an hypothesis, as a means of explaining the ideas we actually have. I think that Locke's suggestion is enough for all purposes.

It may be well to remark, however, that it is very doubtful whether, even if we have such innate elementary ideas, they can be elements or means of actual knowledge—or whether we could even so much as have words or terms to express them.

Suppose, for example, I take into my hands—in the midst of the most profound darkness—an object I had never seen. With all the ideas of color in my mind, I could not tell, and should not know, what was the color of the object I have in my hands.

The fact that I had all the ideas of color in my mind whether innate or otherwise would be of no avail.

Or again. Suppose I have an *a priori* idea of some elementary property, that I have not obtained by actual cognition. How could I get a name for it? With the object before two or more of us we could invent a name if we had not one already. But without such an object, and without actual cognition of it, I should have no means of comparing my ideas with his and finding a word which, as a common sign between us, would indicate or express that idea.

If the idea were a complex one, one that represents a real object, or even a property of an object that can be resolved into simpler elements we might be able to define it, or to describe it so that we could make our idea intelligible to one who had never seen the object. Thus though the colors gray, green and orange are complex, we really get our ideas of them from a single act of cognition. But I can well believe that we could so define or describe them that a person who had never seen an object that is gray, for instance, but who had seen one that is white and another that is black would be able to understand us—imagine an object that is of a gray color. But I see no way of making known to another person an *a priori* idea of an elementary character, such as whiteness, for example, even if we had one: it cannot become an element of knowledge and we could have no name for it.

Cousin's effort to prove the necessity and the reality of *a priori* ideas is the most systematic, elaborate and complete that has appeared. And his apparent success depends on two fatal mistakes: (1) he overlooks Locke's second class of elementary ideas, and (2) the test words he proposes denote complex ideas so far as to vitiate his whole argument. (Lectures on "The Course of the History of Modern Philosophy," Vol. II., Lects. xvi.-xxi. Or in Henry's "Cousin's Psychology," chaps. ii.-vi.)

Cousin proposes seven test words, "time," "space," "substance," "cause," "personal identity," "good and evil," and "Infinite" or God.

Now we must remember that all *ideas of things* are necessarily complex, in a most important sense: the idea of an orange, for example, is made up of elements derived from the orange by

at least four different senses, sight and touch, taste and smell. And just as all the objects in the material world can be resolved by chemical analysis into some sixty-four or five elements, so all our ideas of things may be resolved into a few elements, or elementary ideas denoting their properties.

If now we turn to Cousin's test words—the first three—*time*, *space*, and *substance*—are represented in the mind by complex ideas. And whether the objects are realities or mere fictions it is certain that we predicate of no one of them any property that we do not predicate also of, and ascribe to, some material object as well. Cousin does not make any attempt to show that we do; he does not even appear to have thought it necessary to do so. Is space extended? So is this paper. Some philosopher has said rather wittily—"Space cannot be a substance; for it has no properties. And it cannot be a property because it is where there is no substance." Then, of course, it must be a fiction, like the equator or "an imaginary line" surrounding the earth.

Is time enduring? And does it last a while? So does the pen with which I am writing. What do we say of substance? Has it any properties? If so they are only properties of the material object with which we began the process of abstraction by which we arrive at the idea of substance. The process could add nothing to that we had when we began.

Cousin claims for these ideas that they are *a priori*. I have never seen the river Nile or the Pyramids of Egypt. And yet I have a very distinct idea of them; and, in the sense of having been formed before any actual cognition of the objects themselves, the ideas are *a priori*. And in a certain sense they are *intuitive* ideas also; that is, we form them by an act of intuition—or looking upon the objects by imagination, as if they were present to the sense-organs, when in fact they are not so.

But when we come to consider the other four, "*cause*," "*person*," "*God*," and "*good* and *evil*," we encounter a different state of facts.

Let us take the first two, *cause* and *personality*, or personal identity. The idea of self, person, or our own minds, is gotten of course from consciousness; and its elements are contained and enumerated in Locke's second category—"thinking, believing,

doubting, willing." And if Cousin means by "identity" anything more than is implied and contained in the idea of self, or personality, we may get it from almost any object we see about us: the object remains the same—"identical"—through many changes of time and the various modes of existence of which it is capable.

The idea of "cause," as Cousin maintains, is derived from the acts of willing and of effort on our part. And thus that idea comes clearly within Locke's second class or category. And Locke himself had said that we get our clearest idea of force—causative force and so of cause or causation—"from the observation of our own minds in the act of willing or choosing." (Book II, chap. xxi., §§ 1, 4.)

Before proceeding with the two remaining tests—"moral goodness" and "the *Existence and Attributes of God*"—which constitute the subjects now specially before us, it will be necessary to look a little further into Locke's second category—or class of the elements of our ideas, and scan its contents a little more thoroughly than Locke himself seems to have done.

I have already alluded to the fact that even Locke himself does not appear to have seen the full scope of his fundamental positions nor to have applied them to the solution of the examples which he had before him.

He speaks of "acts and activities" of the mind in which we cognize objects. But he does not mention the passive states of our minds which represent the feelings we have toward the objects, and some at least of our relations to them.

We get our idea of pain, for example, from the feeling of pain; our idea of beauty from seeing something that people call beautiful and "feeling its beauty." We get our ideas of love and hate, from the feelings which other persons and things excite in our own minds.

Now I think that our moral and religious ideas—that is, the elements or "the matter of them"—"the prime factors" of them, as they have been called, belong to this class—though they are of a still higher grade. They come from our consciousness—"the perception the mind has," to use Locke's expression, of its own states and feelings when cognizing or thinking of certain objects.

The objects themselves excite the feelings and thus the feelings—or the ideas we get of them—come to be the source of the knowledge of our relations to the objects.

I think it important, at this stage of our inquiry, to call attention to the distinction, and the important difference, between an *idea* and a *judgment*. If I call an act or an object good, I express a judgment concerning it. This judgment may be based on an act of sense-perception, or an act of consciousness, or, on a state of our feeling, or on a process of reasoning. What I am now inquiring after is not the ground of the judgment or affirmation—that is, the reason why we affirm it—but the origin of the idea that is expressed or affirmed by the predicate—the word good. Just as when I say the paper is white, I express a judgment concerning it; yet the judgment implies the idea of “whiteness” as in the mind before we can either affirm or deny the proposition. Our first question then is not *why do we call acts good*, but it is, how do we come by the idea of goodness which we affirm of them?

I think we must answer this question by saying that it is by consciousness of our feelings toward an object—the feeling which the object excites in us—just as we call an object white or red or yellow because of the character and kind of the sensations which it produces in us. We get the idea in one case from sense-perception of the object, and in the other from the consciousness of the feeling which it excites in us.

I think that Cousin in his reviews of Locke's *Essay*, already referred to, has shown, beyond further doubt, that the idea of “the good,” or goodness does not come from any mere sensation—or sense-perception alone; and that it is different *in kind* from any ideas that can be obtained from mere sensation. State it in a general way and I presume that everybody will assent to our proposition; nobody knows what the words “duty,” “sense of obligation,” “remorse,” “pity,” and “love to God” mean, except those who have had experience of the feelings denoted by these words.

This, then, is my proposition, that the elements of our moral and religious ideas come from a consciousness of the feelings that certain objects by which we are surrounded excite within us.

The ideas or elements of ideas that come within this sphere, have the three tests usually pointed out and applied. (1) As a matter of fact they never appear in the consciousness until we have some experience of the feeling which the idea represents. (2) They never come at all when there is absence or inactivity of the organs or means of cognition, just as the idea of whiteness never comes to those who have no eyes, or whose eyes are for any reason at the time inactive; and (3) they cannot be so defined or described as to make any one who has never experienced them, understand what they are, or what the words we use to denote them, really mean. I have cited as illustrations and examples, physical or bodily pain, personal affection, beauty—or the sense and the admiration of beauty—sense of duty or obligation to what is right, remorse for wrong that we have done, and piety, reverence, love and gratitude toward God.

Our subject divides itself from this time onward into three parts or separate topics. (1) Our ideas of the morally good. (2) Our ideas of the sense of duty or moral obligation. (3) The ideas we have of the character and attributes of God and our relations to Him.

I. With regard to the ideas of the first class. I am inclined to think that the idea of good had its origin and first emergence into consciousness, from the mere sensations of *physical* pain and pleasure. These sensations must be first in the order of development in the consciousness; and the idea or thought of them arises only as we are conscious of them. And we are pretty sure, in that stage of our experience, to call that good which gives us pleasure or pleasant sensations.

But in time, with more experience and on reflection, we come to distinguish between what is good and what is merely pleasant. We often say of a thing that it is pleasant, but it is not good, or “I doubt if it is good for me.”

If we look closely into the matter I think we shall see that while the word “pleasant” denotes an agreeable feeling, with reference to ourselves alone or chiefly, the idea of good has a wider comprehension. Good has reference to other persons; and perhaps to ourselves in a wider range of experience; so that, as above said, there may be a difference amounting to a

contrariety between them, and that may be adjudged to be good which is not pleasant, and the reverse; much that is pleasant for the time may not be good in the end.

Do you ask, then, whence comes the idea of "good"? I think it comes from the idea of pleasures or enjoyment, and is a modification of it. Thus what promotes the pleasure, or well-being of all persons, or in fact of ourselves, on the whole, in the long run, is the good for which mere pleasure and present enjoyment must, if need require, be sacrificed.

There are those, however, who insist upon what they call "the absolute good," or an idea that could not have come from any experience we have actually had. And so all ideals are beyond experience; but they are only experience idealized. I think Socrates has said that what is not good *for* something is only good for nothing; there is no absolute good in any other sense than good always and for all purposes.

Turn now to our judgments of good and right, and we find another element. And here I think we shall find all that has been really claimed by the idealists such as Cudworth, Samuel Clarke, Richard Price, and men of that school.

Besides judgments, based on experience and relating to matters of fact, we have certain *a priori* principles or axioms that are based purely upon the insight we have into the nature and possible relations of things themselves and their properties and modes. All *sciences*, in fact, are based in part upon such self-evident axioms. Mathematics is built on these axioms and definitions altogether, using definitions for facts or in their place. And just as the mathematicians have shown that if objects exist it must be in conformity with the laws of number and form, as indicated by arithmetic and geometry; and if they are to exist in space as separate articles and at different distances from each other, it must be, as Whewell has shown, in a system of revolutions under a law of gravity like what we now have; moreover, that if they are to exist as individual objects anywhere, whether in time or space, they must exist, as Hegel has demonstrated, in the relations of classification, including and dependent upon subordination to the *summum genus*, and in co-ordination to each other; so I think we can show and demonstrate, *a priori*,

that if beings like ourselves, intelligent and capable of choice and moral action, are to exist at all, they must live in some sort of social relations, and that these four, benevolence, truthfulness, justice and subordination to some superior, with loyalty to Him, are, and must be, the necessary conditions of their existing. They are necessary, not only to their *well* being, but, in some form and to some extent, necessary to their very existence. For if there is more than one there must be *some* relation between them, and some law of that relation.

In this view we have some "necessary and immutable principles of morality," which are of such a nature, and so founded in the nature of things, that no system of philosophy that recognizes only the ideas derived from sensation can account for their existence, or justify us in claiming for them any binding obligation. But we are so constituted that as soon as we see the law or appreciate the demonstration by which it is proved to be necessary and founded in the nature of things, we *feel* it to be obligatory and consider the man who obeys as meritorious and deserving of approbation and favor; and the man who does not regard and obey it, we consider worthy of blame and deserving punishment. But there is no element of our idea that is not found in one or the other of Locke's categories.

II. I pass now to the second topic, the idea of duty and the sense of obligation.

Duty and obligation always have a personal element. Whatever is a duty at all is the duty of somebody.

But a sense of duty or an idea of duty, if we choose that form of expression, implies not only personality on the part of the person to whom we ascribe it or for whom we regard any act as a duty; it implies also, and moreover, freedom and power of choice.

And now our distinction between an *idea* and a *judgment* is of the utmost importance. The question before us at present is not are we free, and have we the power of choice—that question could be answered only by a judgment—a mental act of affirmation. But the question now is about the *idea* of freedom. Have we it? If so how did we come by it? Surely we have it or we should have no word or phrase denoting it, and no ques-

tion about it. In a world where all are blind there would be no idea of color—no name for the colors—or any question whether the objects they can know but cannot see have colors or not.

Now, manifestly, the *idea* of freedom, choice, free-will, or, in the psychological and moral sense, spontaneity of action, is not derived from mere inorganic matter. Such objects are not supposed to have it. Nor can it have been derived from animals; for it is a matter of doubt whether they possess any such power of originating action; and at any rate, if we ascribe it to them, it is as a mere matter of opinion and a part of our theory or way of accounting for what we see them do. If we had not had the idea from experience in ourselves we should never have thought of ascribing freedom of action to them. Possibly we cannot define freedom of will; but everybody has the idea of it; everybody believes that he is capable of choosing what he will do, and holds other persons responsible for so choosing.

And not only are they free with the power of choice; there is the power of effort and causation as well. It is not merely that I have the power to choose to raise my hand or to walk across the room—but I have the power to cause motion in my limbs—to lift my hand and to move my feet in the act of walking. The hand cannot lift itself; the feet, if it were not for their connection with the body, and this too a living body, could not move—they would remain forever still and motionless, they would remain as still and motionless as the legs of my chair, or of my table, if it were not for the causative force that proceeds from my mind, myself that moves them.

Do you say that this idea at least is innate? In a sense of being born in us it is indeed innate. But what Plato meant by the word was that the idea was in us—our minds—when we were born and before any experience. Will you then call it *a priori* or intuitive? It is indeed intuitive in the sense that we get it by intuition of *ourselves*—the intuition of our own mental states and acts. But in this sense it coincides with Locke's theory, and is one of the elementary ideas of his second class. We are conscious—or think we are—of willing, choosing and making effort. This nobody denies. But is not the idea *a priori*? Not in Cousin's sense; for, as all will admit, we get the idea

from a consciousness of own mental act and therefore it is *a posteriori*.

This point is a very fundamental one. Nobody doubts or denies that we think we are free agents—free in our choice of what we will do. But the advocates of materialism, the deniers of freedom and the moral nature in man, argue that we must be mistaken; there can be no freewill, no freedom of choice; choice is determined by motives; just as motion in matter is produced and determined by force.

But the question now is not whether we are actually free or not; but it is how came we by the idea or thought of freedom? How did the question arise? How came we by the idea of freedom? Manifestly it came only with experience and as a matter or our consciousness, of our own mental acts and has every mark of being an elementary idea, as truly as whiteness or in fact, as any property of any material object. This power of choice or of acting as a first cause, is the one property that we always ascribe to mind, and never ascribe to mere matter or material things. And its ascription to animals is a mere matter of theory.

I think that we now have all the original elements, all the elements of ideas or prime factors of a system or science, rather, of ethics. We have the idea of good, as opposed to evil, the idea of law as furnishing necessary conditions of social existence, the idea of the power to choose and to do, and a sense of the duty or obligation to choose and to do right; and a feeling of remorse or self-reproach if we do not choose and do the right in pursuit of that which is good.

But I cannot tell why we feel that what is right is our duty—why we feel the obligation to do it or the shame and self-reproach that follow when we are conscious that we have not done as we ought—I cannot tell why we so feel, any more than I can tell why I see this paper as white and feel that iron as hard, or smell the rose as sweet; or why I feel pain when something tears my flesh, or breaks the bones in my body. I can only refer to the constitution of our natures and say we are so constituted, we are so made. The evolutionist says we have grown to be so by development and heredity, and by a long process of evolution. But even so, there can be no evolution, development or heredity without God.

And in one way or the other, by one means or another, it is the nature that God has given us. It is a part of our relations to the things by which he has surrounded us.

III. We come now to our third and last topic—the origin of our theistic or religious ideas.

This is one of the points, or perhaps I had better say, it is included in one of the points, that Cousin makes against Locke, under the title “The Infinite”; for in the scope of that term he includes “time” and “space” and perhaps other objects of thought as well as God.

The adjective “infinite” is certainly negative in form, and I think it is negative and only negative, in its force as a predicate in this connection. It may imply the reality of the subject, but its use really affirms and predicates nothing whatever of its subject; it merely affirms the absence of limits. But then to have limits or be limited it must *be* something. And if we have something that is limited in either time or space, distance or number, it is very easy to invent the *word* “infinite” and apply it even where we know nothing of the subject, not even its existence; hence it may be—nothing.

When, however, we speak of God as “infinite,” I think the word is used rather with reference to popular effect than for scientific accuracy. It would be better to call Him “perfect” than to call Him “infinite”; perfectness referring rather to purity of quality, whereas the word infinite is apt to suggest some materialistic views, as extension without limits.

Cousin names three subjects as coming within the category infinite, “the infinite,” as he calls it. He includes time and space in this class, and makes quite a point of the fact that we call them infinite. He says that, in contrast with all material objects, time and space are without form and infinite. So, too, the air is without visible form. But do you say that any definite portion of it is limited, and the outlines of its reality make form? True, indeed; but space and time have no limits—they are infinite. But are they real? Do they *extend* at all? Are they composed of parts, whether finite or infinite in number? All we can say is that we know of no limits to them, nor do we know that they actually “*extend*” or “*endure*” within limits.

In calling them infinite, therefore, we affirm nothing *concerning* them, but only our own ignorance. Infinite is not a positive property—it is not an elementary or simple idea of anything; but rather the enlargement of extension. An object to have limits must *be* something. But that which is nothing can have no limits and so must be without limits or infinite in a sense. And thus we have, as Cousin maintains, two kinds of infinite or infinity, one that is real but without limits and an infinite which has no limits because it is nothing.

Our first cognitions and experiences are doubtless with the material objects of sense-perception. And I think that, at first, all children conceive of God and think of Him as having a visible form like human beings; and having also, somewhere, a visible habitation—a seat or throne in a place called Heaven, like the best man they know only a good deal better.

And if we consider our more mature conceptions of the Divine character, I think we shall find no difference in the result of our analysis. We ascribe to God all that is best in us; for wisdom—very limited, perhaps, in our case, we ascribe to Him Omniscience; for power, so small as perhaps it might rather be called weakness in us, we ascribe Omnipotence to Him. We make Him *all* good as well as *all* wise and *all* powerful—we call Him perfect and infinite, but in doing so we ascribe to Him, and include in our idea or conception of Him, only what we are conscious of in ourselves in limitations, and great imperfection and weakness.

I do not affirm, nor do I for a moment suppose, that what we thus ascribe to God, as the attributes of His being, includes all that we shall know of Him hereafter nor all that is known of Him by a higher class of intelligent beings in the universe, if there are any, now. God is not, and cannot be entirely comprehensible to minds like ours. We begin with the lowest and most inadequate views, and as we grow in knowledge we may expect to gain clearer and more satisfactory views of the Divine character.

In early life we do not make that distinction between inertia and spontaneity—between second causes and first causes that we find necessary in the progress of scientific knowledge. I do

not know that this distinction was fully recognized and expressly stated until the time of Leibnitz and Newton. But since that time it has been accepted as fundamental. Mere matter, if at rest, cannot *of itself* start into motion or action, and if *moving* or *acting* it cannot change the direction or intensity of its action except as it is acted upon by something else. It cannot act with purpose and for final causes. Whereas our own minds do so act; and as soon as we see that matter does not and cannot so act we find ourselves forced to recognize in nature the presence and activity of a Mind like our own in these respects. And any theory of the universe that has been proposed, necessarily implies the activity of a Being that is spontaneously causal—First Cause—and acts with purpose and moral aims.

And the principle of inertia, as just defined, is essential and fundamental to all the natural sciences. Not one of these facts or principles could be affirmed if the particles of matter—the molecules and masses of which the material universe is composed, were not inert in this sense of the word, but could skip about at will like a frisky human child. The fact of inertia and the law of necessity is at the bottom, is the foundation of all physical science.

If we could know the earliest history of mankind in regard to this point it would be of the greatest service to us. The most recent investigations, however, seem to show that, among Aryan nations, at least, there was a belief—not very definite—a sort of “unconscious monotheism,” as Max Muller calls it, in an invisible Being who was present in all the phenomena of nature—the Force that produced them. We have what we may regard as examples, if not “survivals,” of the use of language that grew out of this state of belief in the expressions “it rains,” “it snows.” Who or what “rains” or “snows”? What is the grammatical antecedent of the pronoun “it”? Perhaps it has not occurred to most persons to consider, to either ask or answer this question.

I think, however, that for my purpose we have in the experience of each child an epitome of the history of the race—in regard to the point before us. I think it manifest that all children—and especially those of a thoughtful, sensitive nature—

come, very early, to feel, if they do not consciously to think and know, that there is, in nature and behind or beneath all its phenomena an unseen Something that inspires them with awe—and fear, if not with reverence.

Now in the same way, and by the exercise of the same processes of thought, early man, as I presume, and many modern children, as I know, ascribe an intelligence and a purpose to the Author of the material universe—"the visible heavens and earth and all that is therein"—an intelligence and a purpose which, as we know, though they do not, implies a substantial Mind that thinks, purposes, and puts forth energy and power to execute His purposes.

But our first or earliest idea is doubtless that of an unseen spiritual power in nature—like the mind or soul in man. I remember one very impressive scene. I was sitting one bright summer's eve, under a magnificent old oak with a bright, thoughtful boy in my lap—he is now an honored minister in the Church of God—and he looked up to me and said, "Father, what makes the oak grow and all other things grow?" I began to talk of the sun and the rain. But he gazed into my face and said, "No, that ain't what I mean, I can't tell you what I mean." Then he dropped his head on my shoulder and wept—and I wept too. Doubtless it was mere emotion at first, but it soon became elaborated into thought, and was finally avowed as the settled belief and the guide to his actions in life.

In the early history of mankind the thought of a One who has, as Max Müller says, no name as yet in their language, came to be divided up into many—one in most of the objects of nature, just as there is one mind in each human being. And hence polytheism; and a polytheism quite as much, as Hearne suggests, to satisfy the wants of scientific men in their efforts to assign causes and account for what they saw in nature, as for the religious purpose of providing for and satisfying the wants and instincts of worship.

But in all this, with the early Aryans, as well as in the mind of the thoughtful child of this nineteenth century of the Christian era, there was and is nothing in regard to the matter before us but the ascription of the ideas we have, and have derived

from a consciousness of our own mental acts and states, to the beings thus supposed to exist and to be manifested in the phenomena of nature.

And evolution—even if we accept that theory—does not get rid of this idea of a God in nature. For if we can conceive of the atoms of matter as eternal and uncreated, they could not have started from their primitive state of nebulosity, a state of absolute rest or equilibrium, without some personal agent to begin the chemical and mechanical action which has resulted in the state of things around us now.

And now that they are in a state of action we may regard Him as the Force that keeps them in motion, so that heat, light, etc., are but modes of Him as Herbert Spencer says ("First Principles," chap. ix., § 82). Or we may suppose with what Tyndall says is the modern scientific idea—that these closer and ultimate particles as well as the larger masses *act on each other* so that what we call heat and light and such like forces are but the modes of their activity—they acting, as he says, *upon each other* without the intervention of other causes or agents—"slave labor"—as he calls it. ("Fragments of Science," ed. 1878, p. 414; ed. 1872, p. 114.)

But even so, these particles were once in a state of absolute rest or equilibrium, and then they either had not the power to act upon one another or they were not exercising it. And in either case there must have been God, either to give them the properties—or to put them into a state where they could exercise them.

But whatever may be our theory and whether they had all these powers in their nebulosity or state of "rest or equilibrium" in which evolution began—they certainly had not then the power of gravitation. And this God must have given them to bring them together, and without it none of the others could ever have become manifest or active; there would have been no light or heat or electricity in the universe.

And so too if we turn to the other extreme—idealism—as exhibited in Hegel. Without identifying thought with God and God with mere thought, so that they are both—the one and the other—one in substance, we may well allow that the devel-

opment of his system has shown that there can be no world without God, and no thought of it that does not imply His existence and reality; and not even so much as a fact, phenomenon or event in nature, that is not a manifestation and embodiment of some thought of Him who is the Eternal Creator of all things.

And thus in either way, and by each of the two opposite methods, we come to the same conclusion—that God is manifest in all things, and all things in Him “in whom we live and have our being.”

And I think we may congratulate ourselves on this result to which both of the extreme theories—agnosticism and idealism—lead: the existence and agency of God, both in nature and in thought, as inevitable. Matter cannot produce the phenomena we see without Him and every thought we have implies His existence. And thus He is not a God that is far off and outside of man and nature—to be searched out only through a past revelation and mere external rites and priesthoods. But He is here and now, manifest in every phenomenon and fact of nature—so far as His purposes concerning it are conceived—as He was with the prophets and apostles of old so far as His purposes in Providence and the guidance of man in the way of Salvation are conceived, and *fully* manifested and incarnated in His Blessed Son—our Lord.

I am inclined to think that a large share of the scepticism and distrust with regard to the existence and reality of the mind, as in regard to the being of God Himself, grows out of a misapprehension, and an expectation—which a moment's consideration must show to be unreasonable. Men seem to think that the mind is something they could see and handle if they could only get at it. Tyndall somewhere says that “in all our efforts to *visualize* the mind we utterly fail.” Of course we do; and we must inevitably fail if it *is* mind and not mere matter that we are thinking of. Hegel has shown beyond question, as I think, in his Logic—obscure as his language is—that there can be no matter without mind—no world without God—and that by the same law and necessity, that the mind can have no one of the properties by which we cognize it or can properly conceive of it

as *mind*, in common with matter, and that God must in all things be the co-ordinate and antithesis of matter, so far as all these properties of matter and His attributes are concerned. It is like the case of darkness and light—silence and sound, they are contraries and can have no elementary properties in common.

Our Lord has given us a good hint in this matter, in comparing the Spirit of God to the wind. We see the swinging to and fro of the limbs of the trees, the waving of the grass, the whirling of the dust; we know they do not *do it of themselves*. But the wind, although we know it to be there, we cannot see—we cannot “visualize” it—nor, while sitting in our rooms, can we feel it. We see its effects. Other beings may have senses by which they see it and see God as we do the world, but we cannot.

The same great physicist who could not “visualize” the mind to his satisfaction finds a similar difficulty with regard to God. While fully admitting that matter, as we now know it, is wholly incompetent to account for all the phenomena in nature, he says “when I attempt to give to the Power which I see manifested in the universe an objective form, it slips away from me, declining all intellectual manipulation.” (“Fragments of Science,” ed. 1878, p. 336.) So with the wind—we cannot “visualize” it nor give it an “objective form,” that is, make it seem like a visible object, and yet “it bloweth where it listeth and we hear the sound thereof.” So too, in fact, with the gases and many of the most forcible agents—destructive as well as beneficent—which we know in the experience of life. We can neither “visualize” them nor give them an “objective form,” but we find ourselves obliged to take good heed of their presence and their power over us for good or for evil. We are dependent upon them and at their mercy every moment of our lives.

But in fact we know mind and God as we know everything else as causes, on the principle of causality or causation. We know the natural objects around only as causes—they act as causes in producing the sensations in us by which we perceive or recognize them. We know the mind as cause of the phenomena of perception, thinking, willing, etc., within us. And we know God—as manifested in the phenomena of nature and in the thoughts and feeling of our own hearts, and in the events of our lives.

Following out this line of thought we have Him as manifest, as Herbert Spencer says and Tyndall admits ("First Principles," chap. v., § 27; "Fragments of Science," ed. 1878, p. 336), in every phenomenon of nature, or of thought, and therefore Omnipotent, invisible, a cause without ever being an effect and therefore Eternal First Cause of all things, the Beginner of evolution, the Guide of all development, the overruling Providence in history. Of course He has no visible or "objective form." He could have none unless He were matter, and then He would not be God.

I think then that we may say that the difficulties of these men grow out of the narrowness of their experience and of their philosophy.

There is one more thought that is germane to our general subject. "If any man will do His will he shall know of the doctrine." Here, as in many other departments of active life, no amount of mere speculative knowledge, no cogency of reasoning, or completeness of argumentation can give, of themselves, the feeling of certainty. There must be a practical application of the principles. New ideas come with advancing experience—ideas and convictions, such as come in no other way. These men have all that they can reasonable expect by way of argument and mere intellect. Let them try to follow their conviction, do His will in prayer and worship and work, and they will *know*. This has been the experience for the last eighteen centuries and with untold millions of Christian believers. No one has ever failed.

If the views which I have been suggesting be adopted, the personality of God will be the central thought of our natural theology. We look from self—our person—to Him as the Infinite and Eternal Person of the universe. That personality in its essence must and will be the central thought, and that we derive from the conscious mind. It need not and will not include *our* weaknesses any more than our wickedness. But it will be essential personality.

Now we know that the two opposite schools that prevail agree in this—the denial of the personality of God in any proper sense: Herbert Spencer makes Him to be "the Force that is in nature, indeed, so that heat and light are but forms of Him," but

then, he denies His personality on the ground that we see in nature "none of those familiar changes which imply a variable will" ("First Principles," chap. v., § 29). "Everything always happens in the same sequence." But a "variable" will is proof of ignorance and weakness rather than of personality in its highest form. We change our purposes and plans because we are weak, and often wrong in our aims and imperfect in our knowledge of things, but God can have no occasion for such changes.

So with the Hegelians—they make God to be "truth and goodness"—not a Being—a Person who is infinitely good and true. With them nothing is substantial but thought: thought is not a person who thinks, it is merely a mode.

But accept Locke's suggestion, and we may say that whether there are innate ideas or not, there are beyond doubt ideas of the second class he names—spiritual ideas, ideas of all the elements of personality. Accept this suggestion, I say, and start out with it, and the idea of the personality of God is the central and controlling idea in all our natural theology. We begin with it in our minds, we proceed with it as—perhaps unconsciously—in all our thoughts of Him, and of nature as a manifestation of Him. And we shall end with the conception of Him as a Person, whose will and whose ways are manifested in all the phenomena of the material universe—in all the best thoughts and holiest feelings of our own hearts—the guiding Providence in all the events of our lives, and in the words of another, "we may regard ourselves as one of the myriad agencies through which He works in all that we see around us or feel or know within us." (Herbert Spencer, "First Principles," chap. v., § 34.)

Our knowledge of external objects as material is immediate—except through the sense organs; our knowledge of ourselves—our minds, is immediate with no intermediate organs or machinery. But our knowledge of God—His existence and attributes—is not like that of either of the other classes of objects in one important respect. It is rather like our knowledge of the minds of our fellow-men. We are not conscious of their mental acts and states, but we see them manifested in their words and in their actions. In this way and by these means we have no more doubt of the reality of their minds than we have of our own

and know about as much of them. Precisely so, with the idea and fact of the inertia of matter in our minds, we cannot but see the manifestations of the presence, thought and purpose of God in all the phenomena and facts of nature.

I often think that in regard to spirits and spiritual things—God and the mind, we are very much as we should be in regard to the objects which we now see and hear around us—if we had not the senses of sight and touch. We should hear the noises they make—we should smell the odors they impart to the air, and that is about all. Doubtless we should at first fail to think of them as objects different from ourselves; we should then be in doubt as we now are with regard to the many cases of false perception that occur in our experience. After a while and the most careful consideration we should come—the wisest of us first—to the conclusion that there must be something besides ourselves to produce these sensations in us. But as we could neither feel nor see them we could have no such ideas of them as we have of natural objects—we could not “visualize” them, give them an “objective form,” or imagine how they look. So now we know mind, not, indeed, how it looks—but by what it does. It thinks and feels, remembers and wills—but we see it not, our hands cannot touch or handle it. Hence the difficulty in believing it to be real—or in “visualizing” its existence—as the expression is often used.

But we must remember that we begin with the objects of sense-perception, and much of this feeling with regard to the mind is the result of experience. We have realized material objects. We have not realized mind in this way and we cannot do so. But here as everywhere else much that seems unreal and impossible at first comes to seem the most real and substantial in the end.

The central and germinal fact of the system I am advocating is the doctrine that all ideas, in their elementary form—or all the elements of our ideas, come into the mind in acts of actual cognition of real objects and in no other way. But cognition, from the nature of the act, implies the reality of the object cognized—“to cognize nothing” is “not to cognize at all.”

But it is said that we know nothing of the substance of

things; we know only phenomena—their qualities or proportions. We may know that an object is white—but we do not know what whiteness is, and so of the rest. The two propositions appear to me to be contradictory—but they are assumed and asserted, and our agnostics seem to me to fall back on one or the other of them as best suits the purpose they have in hand at the time.

Descartes seems to have given expression to the central thought of this double solecism. He compared the properties of things to clothes on the backs of men whom he saw passing under his window and said that, as he could not see their bodies for the hat and clothes that covered them, so we cannot see the substance of things on account of their properties. But one sees at once that this view makes the properties to be real substances—as truly as a man's hat and coat are as substantial as his body.

What we really cognize is the things themselves, and they are white and hard. And this is knowledge—the knowledge we have and the knowledge too with reference to which we guide all our actions. It is related of Hume that after he had announced his scepticism with regard to the reality of external things some one asked him if he did not really believe that the post which they thought they saw standing there before them was really actual, and was actually there. He replied that that was hardly a fair question—what he believed *as a man* was one thing, what he had a right to believe *as a philosopher* was quite another. “But the man is more than the philosopher.”

Now what men believe *as men* is what they act upon in all the practical affairs of life. And as it is in this respect with the material world, so it is with the mind. Men know of it and act according to that of which they are conscious.

But it is said that we know nothing of the essence of the mind, nothing of what it is. And I confess that I am sometimes inclined to think that men know nothing of the meaning of the words they use and the import of their remarks when they say such things. What we know of things is in part their essence—their nature—that is their essential properties. The essential properties of matter or material objects may be hardness, extension, divisibility and such like and this is just what we know of them. They are hard, extended, divisible and so on.

With regard to the mind we know that it perceives, remembers, wills, and thus these are its essence—its nature—or its differentia—if we regard it in contrast with matter and material things.

But people seem to suppose that there is somehow a substance underlying these properties. It is an inheritance from the scholasticism of the middle ages. Descartes expressed it in the words just quoted from him. A moment's consideration, however, will show us that it is a mistake. What we cognize is the substance, the substantial thing manifest in its properties, acts and modes. These properties, activities and modes are not things—but only expressions and indications of the relations which the objects sustain to other objects. If this paper is white it is white only in relation to us—to “our seeing.” If it is hard it is hard only to my hands and because it resists their pressure. To a truly spiritual being it may be neither the one nor the other.

And this is the foundation of what we sometimes hear spoken of as “the relativity of knowledge.” It suggests also a limit to that relativity. The color and hardness of objects are indeed relative; but their form or shape is not; that is absolute. So too the self-evident or *a priori* axioms are absolute, true always, everywhere and for all persons and for all purposes.

And so, also, are the two great facts with which all knowledge begins—the reality of things that we perceive as external—and the reality of the mind within, which we cognize in consciousness. Whatever of the properties and states of either may be accidental and so transitory—or relative—the certainty of their substantial existence, after making due allowance for false preception—is absolute.

What we know of the mind is the basis of our moral philosophy and our natural theology as well. Doubtless both these branches of science will be modified and enlarged—especially natural theology—by what we know of nature and the objects around us. But we must begin with what we know of mind.

With every act of cognition the mind is changed. We know more than we did before, we remember; and in many cases we act ever afterwards in quite a different way in consequence of what we thus know and remember. Our life is guided by it to some extent.

So too with every act; we become changed by it. It is true that our activity begins with mere unconsciousness, involuntary instinct. But soon we begin to know, and what we know guides and sometimes controls our choice. What we choose and do is quite often against our inclinations, for these are sometimes merely instinctive in their nature. But what we choose to do and do from force of will, becomes easier with each act of performance. And this ease sometimes becomes so great that we do, from habit, as we say, and often unconsciously, what we did at first only with great effort. This habit comes to be of the nature of instinct—or as we sometimes say—“second nature.” If now in this process we accept and follow correct moral rules, we progress towards moral perfection. And if, above that, we accept the true doctrine concerning God and our relations to Him and follow them, we grow in holiness and likeness to God.

We have then, if we choose so to regard them, three classes of elementary ideas—the one class is the ideas of the sensible proportions of material objects gained by actual cognition of those objects. The second class, is the ideas we have of mind, gained by the consciousness of the operations and acts of our own minds in perceiving things, remembering them, reasoning about them and willing and choosing concerning them. And finally the ideas we have of the feelings they excite in us, and thus of the relations we sustain to them.

And these ideas are instructive and beneficent in many ways. They constitute, in us, in their lowest form, as they do in animals, what we call instinct. And for animals they are—if not a sufficient guide—yet the only guide they have or are capable of. And they guide us, too, much farther than we are aware.

Take the case of physical pain. We are so constituted that we feel it when there is occasion. But when do we feel it? And what does it signify to us? There is no physical pain except when there is something wrong in the tissues of the body, or in the functions of the bodily organs, that requires attention. This is God’s way of letting us know when all is not well with the body.

So too the feelings of love and hate. In their essential nature they are designed to, and actually do, when properly regulated, draw us to what is good and to those persons with whom it is

well for us to associate; and they tend to keep us from those of an opposite character.

Beauty is akin to what is divine, it has been said that beauty is but "truth in action." And God has so made us that we feel the beauty of what is good, harmonious and expressive of the divine thought whether in nature or in art. He thus keeps us, or would keep us, from what is ugly—and nothing is so ugly as sin.

It is by the same wise and beneficent design and purpose that He has made us so that we cannot but feel that whatever we see to be right is obligatory upon us. All our moral feelings are the result of the constitution that He has given us to lead us in the way of righteousness. And He too has so made us that whenever and wherever we recognize Him and His presence we cannot but adore Him.

It seems to me, therefore, that when we look at the matter in this light we cannot fail to see that the ideas we get of our own feelings—such as are produced in us by the objects around us and above us—are as instructive and important as any others. We have first, the ideas of external things—then those of our own minds. But what are our relations to the things around us and the God above us? Without knowledge of them we cannot know what to do or form any adequate idea of what is to be hereafter. Doubtless instinct is good and goes a great way. But we have something higher than instinct. We can suffer, and suffering comes, for the most part, from ignorance or neglect of what we may know and ought to do in reference to those very objects. They affect us and we can to some extent control them. Our experience with them begins with mere instinct. But out of this experience we get ideas and the ideas make knowledge—and then this higher element—knowledge of course—and reason and will—by means of that knowledge—must guide us, if we would rise above mere animal life. They must guide us too, so far as their proper influence extends, even if we would walk by faith. Faith properly begins only where knowledge ends. "For what a man seeth, why doth he yet hope for?" God gives instinct until we can know. He asks us to walk in the light of our knowledge—whatever knowledge we have or can get, and

walk by faith only when we aim at something that is beyond the reach of mere knowledge.

Such is the divine order. God will indeed forgive our sins: but he has placed the means of knowledge within our reach. He holds us responsible for the knowledge we can acquire and for conduct in accordance with it. The pains of the body notify us when we have violated a law of nature—or a law of health. The ill will of our fellow-men—or at least the loss of their respect and good-will—gives us notice when we have come short in our social duties. Remorse is at hand to torment us when we have neglected the higher guide and monitor that God has placed in us. These things all give us knowledge, furnish us with ideas which must, in any view, become a part of our moral philosophy and our natural theology. Nay, they underlie and modify our views of revealed religion as well.

In this view not only will our natural theology receive light from nature and natural science, but our interpretation of the Holy Scriptures and our understanding of their meaning will be modified by our progress in the true scientific knowledge of nature—His work—and with a better knowledge and comprehension of human history as well. Much that was said and commanded as for children in the early ages of humanity is seen in a different light when we appreciate that fact. It would doubtless be taught in different terms and forms now, and for a more mature age of the human race. Doctrines and principles, that were dogmatic, authoritative utterances then, may be seen now to have been merely anticipations of what science can teach us. Onward they lead us to the result we are still only beginning to reach by our processes of discovery.

Look for example at the mysteries of our faith, the incarnation, the spiritual regeneration of man, the efficacy of worship, the inward grace of the sacraments. Whether we can now or shall ever come to understand these things fully, we can look at history and the experience of believers, and find there an interpretation of the words our Lord and His Apostles used concerning them. Doubtless they meant what true believers, who do His will and thus come to know of the doctrine, have found in their own inmost experience and see that it is this

that He and they meant when they uttered the words which by their own admission, was to the Greeks—the wisest men of the times—mere foolishness. And thus history is not only the fulfilment but the interpretation of Scripture as well.

It seems to me that the one great demand of the age—what it demands more imperatively than anything else—is certainty in the grounds of knowledge which may serve as a basis of belief, and of faith, and of the hope in that which it hopes for. What a man sees, that he knows, and he knows that he sees it. Begin with facts, that no one does or can dispute, and we can lead men to see, with a cautious logic, almost every conclusion that really follows from such facts and principles. But the moment we ask them to accept any mere intuitive knowledge, they begin to distrust our guidance and ask for facts and for reasons based on facts. The practical advantage and recognition which the agnostics have gained is, as I think, chiefly in consequence of their claiming to meet this demand. They appeal to one class of the prime facts of our knowledge, and men of earnest minds follow them and yield to their guidance.

But if I am right in the doctrine of this essay, we have the other class of facts at our command as well. Nobody doubts that he thinks. Nobody doubts that he remembers and hopes, Nobody doubts that he can suffer and does suffer. The principles of morality and religion can be shown, in view of these facts, to be as necessary for the welfare of the soul—and it is the soul only that suffers—as the law of gravity, or that of definite proportions in chemistry is to the material world. Right action and faith and hope have this foundation in the facts of experience which are thus within the cognizance of all persons. Men may doubt or deny them *as philosophers*, but they do and must believe them *as men*.

What a man sees he knows—whether it be a fact of the mind or of some material object, and feels so sure of it that he cannot and will not deny it. The same may be said of certain *a priori* axioms. On these facts and axioms do we build all our theories and sciences. So certain are these facts and axioms, in the estimation of all men, that no man will deny them and expect you to deal with him as possessed of common sense—or common

honesty and sincerity. So sure are they and so sure do all men feel of their certainty that no one thinks of denying them except for effect and to avoid a conclusion which he is predetermined not to accept. And even then we can show the absurdity of his position by an appeal to the facts and axioms. But we must have a ground of certainty to stand upon—a ground that all persons can see to be certain.

But I fear that any recognition or concession of any intuitive element in our knowledge—that is, intuitive ideas as distinct from intuitive judgments—will put us on a ground that is essentially and practically the same as that now occupied by the agnostics. No one can tell what those ideas are. No one has yet, so far as I know or believe, pointed to a single element that is of this nature, and that cannot be easily accounted for by what we certainly have from actual cognitions.

There is a sense, indeed, in which all the ideas of Locke's second class or category may be called intuitive—we get them by intuition of the mind itself—its acts and states. And it is not unlikely that this fact—though it has not been definitely stated that I am aware of—has had its influence in giving to the doctrine of intuitive ideas so much of favor and currency as it has received.

But in the common acceptation of the words intuitive ideas, if we accept them at all, they are an element of uncertainty. What is innate or intuitive to one person may not be so regarded by another. Who shall judge? By what tests shall we be able to distinguish them? How, in these cases, shall we be able to discriminate insight from mere fancy? And above all, how convince one that he is responsible before God and man for any belief or conduct based upon an intuitive idea which he is not conscious of having? Do we not thus make every man a law to himself, under obligation to do indeed—whatever he sees and feels to be right, but under no obligation either in morals or religion, unless he happens to see as we do? Will he not feel that he is unjustly punished, if he is punished at all or put to any disadvantage in this world or in the next, as a consequence of his misdeeds? Has he not as much right to his opinions as we have to ours? And if we are to be regarded as righteous for following our convictions and treated with immunity—if not actually rewarded

—for doing so, has he not a right to the same favor and immunity? And this is the extreme of idealism.

In this discussion I have been careful not to assume, or to say, anything that implies that ideas are anything more than mere convenient fictions—the thought is that knowledge is made up of ideas of things—which by careful analysis may be reduced to a comparatively few elements. Nevertheless the result is the same as if—in each act of observation—something which we can regard as an element and which the mind can work up and combine into a complete idea that can represent the thing cognized, actually comes into the mind. But probably nothing of the kind actually occurs—though the result is the same—so far as our present purpose is concerned, *as if* these objects did send in “imperceptible bodies,” which the mind actually receives and makes up into ideas of things.

As already said, the theory of ideas was first proposed by Plato. But Aristotle several times declares his opinion that these ideas are mere fictions. (Aristotle, “Metaphys.,” B. I., chap. ix., § 1; B. XII. chap., v.) Ried says expressly that he so regards them. (Ried, “Essays,” Ess. I., chap. i., § 5.) And Cousin repeatedly uses expressions that imply the same views with regard to their nature, though his argument seems to imply their reality. (Cousin “Cours de 1829 Leon XXII.” in Wright’s translation, Vol. II., p. 339; in Dr. Henry’s “Cousin’s Psychology,” p. 251. “There is nothing but material objects and a mind endowed with a faculty to perceive them.” See also, pp. 281, 282, 285.)

What actually occurs is that we perceive an object and we are conscious of perceiving it and thinking about it. *We* are changed by the act—we know more than we did before—we also remember and are wiser, and act differently on account of what we then perceived—know and remember. And this is about all we *know* about it. The theory of ideas is a mere theory to explain and help us talk about the facts of our experience; and most probably it is nothing more.

We locate places in our geography by referring to the equator, the parallels of latitude and the meridians of longitude as well and as effectually as though these mere fictions—these “imaginary lines” were there to be seen by all that pass by, as

visible as red tape and as solid as steel. So with ideas—for all purposes except one or two of an ontological character and perhaps some that are of a purely psychological, we may describe mental processes and discuss questions of philosophy by reference to them and the use of language which that theory implies just as well as if it were true in fact. One that uses such language, however, must be able to explain his meaning without it.

In conclusion let me remind you again that I am not trying to *prove the existence* of God or the reality of a human soul in each one of us. But I am trying to show only how we come by the ideas of these things. And I think I have accounted for the origin of those ideas by reference to acts of actual observation and cognition of real objects. If so the reality of a soul as distinct from the body cannot be denied.

And I think that this view of the nature and extent of our knowledge and the origin of our moral and religious ideas, and the feelings of duty, reverence, obedience, love, gratitude—as well as remorse and penitence for sin—furnishes a new line and means of argument for our natural theology. For as surely as God has made us so that we can *feel* a proposition in geometry to be true as soon as we *see* it to be true, so surely in morals and religion has He made us so that, as soon as we see anything to be right, we *feel* it to be a duty; as soon as we see Him, in His acts of creation and providence, we feel Him to be worthy of all reverence, submission and grateful love. Remorse for wrongdoing becomes penitence for *sin as against God*, and disposes us to seek in all the meekness of humility for whatever of guidance He may vouchsafe to give us.

If the views now presented be accepted and persisted in, we shall put our mental and moral philosophy—including natural theology—on the same basis as the other sciences. We begin with observed facts, we proceed by induction, analysis and generalization, we obtain in this way general facts and fundamental laws. And these facts and laws make up all we can know as a matter of science in regard to this world or the world to come. Faith is another matter.

There is, however, one difficulty that we cannot overcome. We must depend on intuition, introspection and self-conscious-

ness. We can have no diagrams as we have in mathematics—no prepared specimens, or *papier maché* models, as in the natural sciences. We must depend upon the power and habit of steady introspection, watching our thoughts and feelings even while engaged, to a considerable extent, in performing the very acts we are studying.

Surely we believe that God made man upright and “in His own image.” And whatever may be our theory and belief on the subject, we cannot deny that he is now everywhere, in his natural state, sadly fallen from that high ideal. But in any view, and on any theory, we must take him as he is, start with him as we find him. But give us solid ground to stand upon—a ground of facts such as no one can dispute or deny, and we have the $\pi\delta\upsilon\sigma\tau\omega$ from which we may hope to move the world.

In thus excluding an *a priori* element from our ideas and our knowledge, whether under the form of innate, *a priori* or intuitive ideas, I am not excluding, and as I hope and trust I am not furnishing any ground or excuse for excluding, a recognition of the divine influence from our minds altogether. There is ample ground for all that we believe concerning such influence and all that Revelation may teach us to believe or expect. God can, and doubtless does—as it seems to Him good—guide our minds in the formation of our ideas of things, and our hearts in the estimate we place upon them and our wills in the choice we make. It may be that we do not know all the ways and means of His action upon us. Nor can we always distinguish between the suggestions of His Holy Spirit and the promptings and suggestions of our own hearts. Yet doubtless we have even here and now such spiritual influence.

But this is not all—the faculties and sense organs we now have are adapted to our present surroundings, and to our most pressing wants. We begin life as carnal—as little more than mere animals. The first necessity—the first in order of time, I mean, not the most important in the end—is that we take note of the things around us; learn their nature and act accordingly. Wisdom begins here. The body must grow and develop. Even our Blessed Lord grew in stature and in wisdom. “That is not first which is spiritual,” in the divine order, but that which is

natural, and then afterwards that which is spiritual. And when that great change comes, in which "our mortal shall put on immortality," and "we shall all be changed"—we cannot doubt that there will be some such change in our mental faculties, and our sense-organs, that we shall be adapted to the new state of existence, as well and as fully as we are now adapted by those we now possess to our present surroundings. Time and space may be, for us, at an end. All the sensible properties of the objects we now see may disappear and things now unseen may be found to be the abiding realities. I believe of course the Gospel narrative of our Lord's appearances after His resurrection. I do not doubt St. Paul's account of His appearance to him. And these facts to my mind suggest a change in our faculties as well as in the nature of the things that constitute the spiritual world. We shall then be prepared for what we can neither see, nor hear, nor understand in our present state of being, for we shall then see as we are seen and know even as we are known.

"THE kingdom prepared for you from the foundation of the world" is a phrase Christ uses to designate the rich spiritual inheritance of the saints. From the beginning of spiritual things, from the foundation of the spiritual world, processes have been at work preparing it for the reception of God's human children into their final home when they shall have passed successfully through the discipline of this mortal life.

And that is just as it is in nature. See how long the great Creator was in building up the home for man and furnishing it as a residence for a sentient, intelligent being possessing a conscience. Look at the laying down of the coal-measures, and the thousand contrivances and adjustments, before man came. The kingdom of nature was prepared for God's mortal children from the foundation of the natural world, and the kingdom of grace was prepared for God's immortal children from the foundation of the spiritual world.—*Charles F. Deems.*

THE LAW OF LABOR AND OF CAPITAL.

[A paper read before the American Institute of Christian Philosophy, August 20th, 1886.]

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HAVING come prepared simply to express my opinions on this great question which is now one of the most important, and which is thrust on the attention of the country, I reluctantly take the first place, and open the discussion which is to occupy the attention of the Institute for two days. I consent to take this place only because the gentleman who was to address you is detained at home by sickness.

In my study of this question of the relations of capital and labor I have come across all the opinions which are held and which have been expressed. I have discussed it frequently with intelligent young men in my college-classes. Many of those questions, which have been the subject of conversation, have come up in their minds and in my mind from observation and reflection. When I have turned to books, which have been written on this subject, I find that the opinions which have been before us have been before the minds of almost all who have given their attention to this subject, or who have thought profoundly on those relations which constitute our civilization. But I have been the most struck with the sentiments and opinions which were elicited by the Senate Committee which sat in various cities of the Union in 1883. One need go no farther than to the report of this examination in order to get the real opinions of the country on this subject. This committee, it appears to me, did a most admirable work when they allowed the expression of the opinions of persons from all sides of this question. The patience, the dignity and the fairness which they maintained must add to their reputation, and give great force to the examination which was thus made.

When your Secretary wrote to me that the Executive Committee requested that I would take part in this discussion, or if more convenient to me, that I would write out my opinions, so that they might be published with the proceedings of the Institute, I chose the former. Possibly, however, it has come to this, that I shall give you simply an expression of opinion, because I find that I can add nothing to a question which is occupying the minds of all sorts and conditions of men—of laborers, artisans, directors of labor, presidents of corporations, manufacturers, those eminent in professions, and simple philosophers. The same phases of this question passed before their minds. There is really nothing new that has been presented. From whatever quarter you have gotten your opinion you will find it in some of the numerous discussions, articles, examinations and books which are daily coming from the press. This may be a reason why I should fall back on the original suggestion of your Secretary, and without being so presumptuous as to suppose that I can contribute anything toward the solution of this question, without even thinking that I can put it in any new light, or imagining that I can change the opinion of a single person, I will express those opinions which I hold, and the conclusions which I have reached in my study and consideration of this great and important question.

And I should like first to say that I deeply sympathize with the laborer. Beyond certain limits we all dislike labor. The *otium cum dignitate* of Cicero is a goal which we all like to place before our minds, and of which we love to dream. A life of toil for eight or ten hours of each day of the week, in summer and in winter, in heat and cold, with no variation, with no prospect of relief, with no expectation that a day will be reached when rest shall be attained, is, to say the least, not a pleasant prospect. I do not at all wonder that there is a desire, nay, that there is a determination on the part of those who perform manual labor, that the time shall be restricted—that it shall not exceed eight hours, or even less than that. I say that I sympathize with that desire, and if it can be attained within the limits and with the means that I shall refer to, I bid the purpose a hearty God speed, and wish it all success. I trust that I am moved by those

benevolent desires that will lead me to rejoice in the alleviation of pain in every direction, and in the attainment of those purposes which will make life not only endurable, but which will make us sincerely to thank God for our "creation" as well as "for our preservation and all the blessings of this life."

I say in the second place that I thank God that my lot was not cast in any earlier period of the world's history than in this nineteenth century, because the means of subsistence and the participation in the pleasures of life are greater to-day than at any former period. If labor is more restricted and is subject to more rules, if it confines men to a more unvaried operation, yet it must be seen that the laborer to-day has a larger share of the comforts of life. And because of his superior intelligence he is more capable of enjoying them. The wonderful advance in knowledge, in seizing and appropriating the forces of nature, and in making them minister to the advancement and comfort of man, is one of the glories of the nineteenth century. It has tended to elevate man. It has put within his reach comforts and enjoyments which, in the two previous centuries, were only the portion of the rich and the powerful. It is this knowledge and this appropriation of the forces of material nature that have brought man up in the scale of life, and that have brought within the reach of all blessings which were once only the portion of the few. While I am writing this paper an intelligent piano-tuner stops at my house, and for information in my subject I ask him at what number he would estimate the pianos in a certain city, with which we were both intimately acquainted, the population of the city being over 50,000, and the number of families therefore about 10,000; he answered 8,000. When I expressed my surprise at the large number, he insisted that the number in use in families was from 7,000 to 10,000, and he added that I had no conception of the number in use in the rural districts. This goes not only to illustrate my proposition, that there is an increased measure of comfort in this age, but that there is also an amount of luxury beyond conception. It would be interesting to know how many harpsicords were in use in an English county a hundred years ago. I certainly rejoice that there is such an increase in the general wealth, in the refinement and taste of the

working-men and women of our day, that a mechanic can venture the opinion and insist on its correctness, that a piano is to be found in the majority of the houses of the working-men of our country. These men are to-day better housed, better fed, better clothed, have more education, and are more able to exercise the functions of man than in any period of the past. Human labor to-day could not produce the various articles which are in daily use in the cottages of the poor as well as in the stately mansions of the rich. It is said that in Massachusetts alone machinery does the work of ten millions of men. These men, if for a time they are thrown out of employment by the introduction of new machinery, are yet put into the possession of comforts at a price within their reach. Take the hundred and twenty thousand miles of railroad in this country, and what innumerable benefits has it brought with it. It has brought the great grain fields of the West almost to our doors. Certainly very much nearer to-day are the great prairies to the City of New York than the grain fields of that State were to the great metropolis seventy years ago. Our western lands were of no use to us in the first half of the century because we had no railroads then to bring to a market their produce; and if we had had then the means of transportation we had not the machinery by which the horse and the steam carriage could gather in the crop, which to-day it is simply beyond the ability of man to do. Fifty years ago a barrel of flour produced in Illinois would have cost ten times its value for transportation to Boston, which can be done to-day for one dollar and a quarter. This benefit is one which affects the laboring man vastly more than the rich or the great land owners of those days. It gives the poor man as good bread as it gives the rich. It is then certainly a great blessing to live in the latter part of this nineteenth century rather than to have lived one hundred years ago. The means of living of the Scotch peasantry on the borders of the Tweed at that period can bear no comparison with the means of living of that same class to-day. And it is chiefly owing to the introduction of machinery, to employing the forces of nature, to do the work of man.

I wish to say in the next place that the moral and mechanical forces, which are in operation to-day, have brought the world

more to a level. You often hear it said that to-day there is a greater accumulation of riches and a greater concentration of poverty, which is true in a certain way. There are to-day a few persons with enormous wealth, and there are to-day more uncomfortable living, more squalor, more dirt, more unhealthiness. But the poverty like the wealth is more confined. It is not the characteristic of the age. There is not the overbearing power or the exceeding condescension of the lord of the manor. There is not the cringing submission or the trembling apprehension on the part of the laborer. Humanity has asserted itself; and each party has come to know its place, because it has come rightly to estimate its power and its resources, if not in its full measure, yet approximately. If there is yet room for great advance and for great improvement, it is still a step upwards which has certainly made this world a more comfortable world. It may have robbed it of some of its romance, but it has given to it a reality which has brought with it a blessing and a comfort. The workman of to-day is an independent man, who has a dignity and an importance, and when they are united with self-respect, they exhibit a man who calls forth our admiration. It is often said, but not often with justice, that the poor man, the laboring man and the serving woman, are debarred from our churches because they cannot come into contact with the rich dress and adornments of the wealthy. But there is nothing in the world to hinder them. There is no squire's pew from which they are repelled. In the parish churches of our rural districts there is no hindrance except that which arises from the pride of the poor and the want of self-respect—the want of true independence. It appears to me that it is a miserably deficient excuse that is often made, and a very great want of appreciation of true manliness, when one shrinks from going in at the same door, or kneeling at the same altar-rail because of the rich clothing of the wealthy neighbor. They often look for a condescending smile, or a gracious recognition which shows a cringing that is unworthy of manly independence. The forces of material nature, which have been brought into operation, the forces of steam and of electro-magnetism, have been great levellers in our day. They have changed the form of our civilization.

They have made this a very different world, in many respects, from what it was two generations ago. It is a change which the man of labor above all ought to appreciate. It has not brought down the rich man; it has left him on the same plain; but it has certainly lifted up the man of labor. It has shown his importance to the world. It has shown that the world in certain ways is dependent upon him as well as upon the hereditary ruler. It has shown that the brains of the one are of the same value as the brains of the other. If the rich are no less happy they are equally as important; while the man of labor is elevated, is brought to a much higher level, his manhood is wonderfully developed, and his importance greatly increased.

I remark in the next place that society is the result of law. Aristotle said that man is a *political animal*. He is made for association and for society, and his happiness comes from that association. The laws which bring us together and regulate our relations and dependence are as inexorable as the laws which bring into their place and keep in their place the planets and satellites of the solar system. When Plato constructed his "Republic" it was really only an analysis of human society as it existed. He wished not to make a new society, but he wished to find the elements of which it was composed, and the relation in which those elements stood to each other. When Sir Thomas More wrote his "Utopia" it was with a similar purpose. It was intended to regulate and temper society by the ideal of a philosopher. It was reserved for France, in modern times, after the revolution of 1789, to construct a new society which vanished into nonentity almost before it had budded into existence. The New Harmony* Society and the Mormon Society of our day, which had their existence not from the tendencies of nature duly restrained and regulated, not from a nature which was according to the likeness and pattern of the divine, but from a perverted nature, have become the scandal of the civilized world. The society, of which we are members, has come into existence because there are planted in our nature certain wants and forces and tendencies. They are just as real as are the attractions of

* A settlement on the Wabash in Indiana in 1824, under the direction of Robert Owen, in which he made an unsuccessful experiment of socialism

material bodies ; and they act in accordance with a law, with a uniformity and constancy as certain as the law of the inverse square of the distance. It is these laws which have brought into operation a society such as we have to-day. You cannot vote it out of existence any more than you can by your resolutions annihilate the solar system. You can doubtless bring some of the forces to bear more directly on one part, or in one direction, or you may restrain some of the force, and thus you may give a new direction to some tendency. This is what is going on in our modern society. The new forces, to which I have referred, have in our generation given a new direction to certain other forces. We get, as in material philosophy, a new resultant. But still it is a resultant. It is a society which is the result of law, of natural forces, of the uniform operation of certain causes. And it is for this reason that you will find in every society from the beginning of history the chief and the subordinate, the rich and the poor, the man of influence, and the dependent. Huxley is reported to have said "that he would rather have been born a savage in one of the Feji Islands than have been born in a London slum." But if that freak of nature had taken place he might have found himself all his days the dependent on a more savage chief instead of having within his reach the possibilities of an independent man in the most civilized of nations. Moses said that "the poor shall never cease out of the land" (Deuteronomy xv., 11) ; and our Lord, looking upon the natural divisions of society, showed that the benevolent feelings of our nature should ever be exercised on this portion of society.

I remark again that the degradations of poverty follow a law as well as the accumulations of society. Production, and the value of production, are not chance operations. They are not carried on at haphazard; but they are regulated by a law. Look into the operations of a large city; take the City of New York. Think of the amount of perishable material which is every day brought in to sustain life, and without which depopulation would be the result. Look again at her various occupations, with the various tastes of men and of women, and find them all filled, and only a few remaining over and not employed; and

it is visible that in all this there is a law in operation; that one thing, one operation, one branch of trade is having its influence on another, and is balancing it. The whole system of trade, of supply and of demand and of consumption, is a harmonious and balanced one. It will at once be seen that it is following a law.

Again, I think this will explain why there are rich and poor, and why there is a large middle class. It is the result of a law, just as the development of society and the operations of trade are the result of a law. There are certain forces working which are causes, and effects must be produced. The rich shall never cease out of the land any more than the poor. Riches, accumulation, control over a large part of land and of productions are the result of ambition, of brains, of enterprise, of ventures, of foresight, of sagacity, and of boldness. It is these objects aimed at and hoped for that nourish and cultivate all these great qualities. They are the rewards of industry, and of all commercial virtues. The real form of society is fixed by nature; we cannot change its essential character. We can only improve it, make it work more harmoniously, make it produce greater benefits to every class. All communistic philosophy is founded on a false classification of facts, and the failure to give to each factor the importance which belongs to it. If there are evils attending any one form of society, it must be remembered also that there are vastly greater blessings attending it. It is this form of society which gives us the results which we recognize as benefits. If we should overturn it, it would in less than half a generation, by its own natural attractions and affinities, again form into the same society which now exists. The working man and the rich man must be content with the society which exists, and must conform themselves to it. They must each contribute their share to alleviate its pains, and to strengthen the bonds which bind it into harmony.

I remark again that as there are laws of trade, of supply and demand, so there are laws which regulate labor and capital. We have all of us something to give, and to give it for a consideration. And everything that we have to give has its market value; that is, it is of such a value that it will bring a return; and society can endure and progress just so long as that value is

recognized and paid for. Political economy is a science which investigates the facts of the industrial world, of the trading world, of the producing and consuming world. It observes, and collects its facts; it names them; it accounts for them; that is, it puts them in their rational relations of cause and effect. It is not an exact science like mathematics, or astronomy or chemistry. The relations of the facts are not always visible. There are also so many facts bearing on each other to produce one result that the question becomes a difficult one. The problem of "the three bodies" in astronomy does not require a more complicated investigation than the facts of the economical operations of society. So complicated are they that it has been recently proposed that there should be a division of the science so that many minds may be called in to do what it is not within the power of one to do. It is not strange then that there should be great confusion in the study of this subject, and that it should be easier to follow in practice the laws of trade as they are brought into operation day by day than to be able to state them on paper in their theoretical relation. This may be seen in an amusing degree in the investigations of the Senate Committee. And we can only be amazed at the patience with which the committee listened to the philosophy, so called, of the quacks and charlatans of political economy. It was stated by Mr. John Roach to that committee that numerous manufacturers, and he among the number, would, under the false views which are prevailing and the extravagant demands which are made, be willing, if it was within their power, to sell out their establishments and be content with ordinary income that would arise from the investment of that amount in Government securities. False and erroneous views must have just this effect. They must drive out of business—drive out of the market not only capital but also the brains which can use capital, which can bring it into successful employment in society. It is an instructive lesson that Mr. Roach gives in this examination, when he states how he and three fellow-workmen of Allaire's Works in New York set out forty years ago in operations on their own account. Three retired and only one remained after their first trial, each of them no doubt being equally as skilful a workman. But this one had faith and courage;

and the faith and courage which not one in a hundred thousand possesses. Faith and courage are necessarily connected with capital. They are the qualities which, in most instances, have amassed capital.

I wish next to say that it appears to me that the inheritance of wealth is according to a law. It is often said in this controversy that many who have wealth to-day did nothing to gain it. But the hodman might say the same to the bricklayer as the bricklayer says to the one who has received his inheritance of large property from the labor and brains of his father or grandfather. But I suppose the children of the hodman are just as precious to him, and their gratification is just as dear as the children of the millionaire are to him—that he makes as many sacrifices for their maintenance, education and future prosperity and success as the millionaire, or the one, who is striving to lay up a fortune, makes for his children. It is a law of our nature. It arises out of the affections placed in the human heart. The hodman is just as human as the millionaire; and the millionaire has just the same amount of love in his heart for his children as the hodman has. If you violate this law you break down society. You try to organize one which ignores these deep principles of your nature and it has in it the seeds of decay and death. The Greek family tried to ignore the principles of our nature, while Christianity developed them. The Christian family therefore replaced the Greek family. You put on the accumulations of wealth some of the restrictions which were named before the Senate Committee, and you would suppress, for the time, the operation of those principles which make society to progress. You would quench the ambition and dampen the courage which build and improve our railroads, and which lay our ocean cables, and which send our steamships into every port of the world, which carry to them our productions and which bring back to us their luxuries. The one who amasses a fortune is a public benefactor. He has done so by putting into operation causes whose effects operate not only for his benefit but for the benefit of the whole community. And this is just as true of the inheritor of wealth. He does not place it in coin in his vaults as our Government does its cart-loads of

silver, but he invests it in works which require labor, which make industry remunerative, which give occupation to numerous hands, which advance the progress of society, and which put bread into the mouths of fathers and mothers and children. The railroad by whose side I live was twenty-three years ago almost a disgrace. You might buy your ticket and after exhausting your patience of waiting, go home and hope for better things on the morrow; but to-day, because it came under the sagacious oversight and management of a man who knew how to amass wealth, you may set your watch by the regularity of its operations. In one sense such a man is a public benefactor. He is making a way for others to obtain the rewards of their industry. He is making this a more successful and prosperous State. He is making it possible for workmen to buy pianos. And yet we hear mutterings against the holders and managers of railroads. It is said that they are private corporations and may oppress the workman and the poor. They would have the railroads and telegraphs taken out of their hands and put under the direction of the Government, so that they may be brought within the reach of the political beasts of prey. They would possibly have society brought down to the dead level of the Spartans, and a public table minister to us its black broth. What is it that has developed the sagacity of the man of business, the courage of the engineer, the taste of the architect, and the industry of the man of labor, but that each one knows that he shall reap the fruits of his own works, and that he can hand them on to his children; that not only shall they bring to him immediate comfort and pleasure, but that they shall not die with him. It is because the law of life, the law of trade, the law of industry is allowed to operate and bring about the results which are natural and appropriate. It is this that has developed and made the country what it is. It has removed distinctions and let law, natural law, the law of trade, the law of industry have its appropriate course.

I remark again that the evils which take place in society are mostly the result of the violation of the laws of trade and the laws of health. I was remarkably struck by this in the report of the Senate Committee in the case of Manchester in the

State of New Hampshire and Fall River in Massachusetts. In the former there were comfortable houses provided at a moderate rent, many of them also being owned by the operatives. The laws of health were observed in their construction and in their appointments. Their wages gave them a comfortable living. Cheerfulness and contentment reigned. And as a result in the evenings, after the hours of work, the chief street of Manchester was filled with a happy crowd. While in Fall River the dwellings were placed without respect to health, convenience, or comfort. The home did not afford the happiness which was sought; and discontent and strikes were of frequent occurrence. I suppose the same is true of all our large cities. The working population is crowded together in a manner that filth, ill-health, discontent, and hatred of one's condition and of life itself are the results. I have no doubt that the real cause of much of the discontent is the mode of living. And I have no doubt also that, if the same efforts of working-men, which are uselessly expended in strikes and in contentions, were turned to the making provision for the improvement in their mode of living, that that improvement would take place, and that they would have better houses with the means at least to be clean, and healthy, and comfortable. We often say that drunkenness is the fruitful source of the unhappiness and the evils which affect society. There is no doubt of it whatever. But I have an opinion that if you should give the workman a comfortable home it would rob the saloon of very many of its frequenters and patrons. It is in many instances the relief from a den of indecency. I do not think that untidiness or filth is a necessary result of many places. I mean that if there is the wish or the appreciation of cleanliness it might be had in almost any place. But the house and its situation should be such that it would invite cleanliness and health. It appears to me that if the efforts of working-men themselves, and of those who have the good and advancement of society at heart, were turned in this direction, to providing homes, clean homes, where fresh air has its course, where decency can be maintained—to the erection of homes which would be worthy of the name of homes, a great deal of the murmuring and discontent which we hear would cease. One workman before the

Senate Committee ventured the remark that he thought it would be more becoming if some of the large gifts of our millionaires were appropriated to supplying homes for the men of labor than to the establishment of public institutions. We could dispense with some of our hospitals if we could turn the money into a channel which would furnish houses into which sunlight and fresh air could find their way. Much more, certainly, is wanted than an improved tenement-house.

But with all our efforts in the direction of Christian philosophy, poverty and filth and indecency and discontent and crime will exist. Rum will be drunk to such an extent that families will be impoverished and indecency will reign. The slums are not a result of the laws of trade, or the laws of labor. They are a result of ignorance, of laziness, and of impurity. I am sure that if any one of the tenement-houses of New York were to be occupied by the members of the Institute of Christian Philosophy, they would let in such a quantity of fresh air and Croton water that it would cease to be a slum in less than twenty-four hours. The slums in a large measure have their foundation in the degraded human heart, in the love of laziness and the disregard of filth. But this is the exception, not the rule, of which I am speaking.

I remark in the next place that the great principle which underlies all the operations of this country is that each one shall have his own. That is the definition of justice in the civil law. The Roman law intended that each one should have justice, that he should enjoy his own. The Roman law, long before the Declaration of Independence acknowledged the natural equality of every man—that he was born with equal rights, and that law was intended to give to each one his own, and maintain him in the enjoyment of it. The Institutes of Justinian set out with that proposition. It was recognized as the normal condition of human nature. The Roman Law was swept away in the revolutions of the middle ages. But it came again to establish itself in modern society. Its principles reign in the institutions of every State of this Union. Every one here is declared to be born with equal rights and with the power to enjoy whatever his own good fortune and his intellectual capa-

cities may bring to him. Every one may be the architect of his own fortune. Communism, like feudalism, is the attempt to disturb this, and to confer benefits on the few. The law of mediæval Europe made the feudal lord all powerful. It was the Declaration of Independence and the Constitution of the United States, which swept that all away in these colonies and States. Communism is the attempt to bring in the power of the law to take from individuals what they have acquired and to distribute it to all the members of the State. It is a tax on brain, on justice, on integrity, on skill, on faith and on courage ; and it is a reward for dulness, sluggishness and laziness.

When the rich and the powerful acquire their riches by over-reaching, by grinding the poor, by combinations for merely raising the price of production, without respect to the claims of the working-man—when twenty manufacturers combine to close their factories, to stop production when they are already making a profit, and thus to throw out of employment thousands of men of labor, they are violating that fundamental principle of our American society. They are dependent on the man of labor, as the man of labor is dependent on them. The production of their wealth is dependent on the labor of the working-man just as and in the same degree as the wages of the working-man are dependent on the skill and faith and courage of the capitalist. When you combine to stop the one you in the same degree stop the other. It is a violation of justice. You are not allowing the man of labor to have his own. By a positive and determined act of the will the capitalist is thus preventing the man of labor from exercising his gifts and from having his just returns. And this may be done in numerous other ways which I have not now the time to name. And so on the other hand the combination of the men who labor to force the capitalists into their views is a similar violation of justice. No doubt each man has a right to charge for his work what he pleases, but in doing so he must take the chances attending it. Yet certainly according to no principles of justice can he combine with his fellow-workmen to prevent either the capitalist from employing others to do the labor which he refuses to do, or to prevent the laborer who wishes to take his place. If one or all employed

on a railroad, or in any branch of trade or of industry, choose to say that they will not work for the wages offered, or that they will not work in company with certain persons for any reason whatever which seems good to them, I do not see why they have not a perfect right to do so. But when they say that no others shall work in their place, then they are certainly exceeding the bounds of justice. They are then interfering with the rights of capital, and they must not be surprised if all the power of the State is brought in simply to enforce justice, and to protect the right of each one to control his own. There is nothing in all this that should be asked but justice—that each one should be allowed to make the best use of his own. That seems to be the principle laid down in the parable, “Friend, I do thee no wrong ; didst thou not agree with me for a penny? Take that thine is and go thy way. I will give to this last, even as unto thee. Is it not lawful for me to do what I will with mine own?”

If we could all learn this simple but great principle of doing justice, of allowing each one to have his own ; and if each one would make a just use of his own, it would temper and balance society, and it would then move on harmoniously and peacefully.

No doubt a great deal more is incumbent on Christian men. It is no doubt the purpose of the American Institute of Christian Philosophy to search for the principles which will alleviate suffering, and which will enable each one not only to have and enjoy his own, but also to bring into view those other principles which originate in Christian brotherhood, which shall so bind men together that they will bear each other's burdens, and will remove want and distress in such a way that this happier state shall seem to be the result of natural causes rather than the condescending gift of charity. But I have thought it necessary to dwell rather on those fundamental principles which must underlie all our philosophy—those principles which must regulate all our relations, and which must make our civilization. It leaves, then, the question for this Institute to determine, if possible, what new forces it may bring into operation, and what new direction it may give to any of the natural forces which shall work out better results, which shall bring society more into harmony, and which shall produce a larger amount of human happiness.

THE CHRISTIAN USE OF WEALTH.

[A Paper contributed to the Capital and Labor Discussion, Summer School, 1886.]

BY SAMUEL M. HAMILTON, D.D., NEW YORK.

IT has been well said, that the problem of a better distribution of wealth transcends all others in importance for this generation. Not only in Europe, but here at home, the toilers have begun to ask with ominous persistency and earnestness: "Why have not we a larger share of the necessities and comforts of life?" They are told that the masses are a great deal better off to-day than they were fifty years ago. They readily acknowledge that to be true, but they ask: "Does the improvement in our condition bear any comparison with the improvement in the condition of the happier classes above us, whose numbers are much smaller than ours, but who get the lion's share, and some of them far beyond their wildest wants? By what law, human or divine, does the merchant prince spend thousands of dollars a year in luxuries which he could do without, while we have often to see our children and our wives suffer for the want of healthy homes, or a little change of air, or timely rest?" It is not the fact that some have more and others less, that embitters the hearts of multitudes to-day. It is the startling contrast between Fifth Avenue and Avenue D.

My contention is, that Christianity is the true remedy for the social unrest of this generation. It was Fichte who said: "Christianity carries in its heart a renovating power of which we have no conception. Hitherto it has only acted on individuals and through them indirectly on the state. But it is destined to become the main organizing power of the state, and then it will reveal itself to the world in the full richness of its blessings." I believe that the religion of Christ is not yet half understood, either by the Church itself, or by those outside its pale. I believe that had our Master's teachings about wealth been consis-

tently carried out, we should have had none of the social agitations that now torment us.

Let us consider how He dealt with the question of wealth and poverty. He did so in a very practical way. His counsel to the rich young man was: "Sell all that thou hast and give to the poor and thou shalt have treasure in Heaven." He could not mean that the young man was to squander his wealth indiscriminately on the vicious and the idle, and so make them worse. But between his possessions and the penury of the masses around him, there was a tremendous contrast; and if he would please God, Christ advised him, instead of using his property selfishly, to spend it so as, in wise ways, to relieve the needs and brighten the lot of those not so well off as he. Then again, the attitude of Christ towards poverty and wealth may be discovered in the action of Zaccheus after his conversion. Why did this man offer to give half his estate to feed the poor? Surely because he had learned that such use of wealth was what Jesus required, and would be pleased with. And then how plain is the teaching of the parable of Dives and Lazarus. The crime that condemned the rich man was nothing more than this, that being rich he neglected the poor. He would not put himself in any way on the same side of the gulf with Lazarus. And mark the result. He never was on the same side of the gulf with Lazarus. In the other world that gulf was as deep and wide as ever—only then Dives was on the wrong side of it. The man above all others whom God cannot tolerate, is he who uses his money selfishly. Between such a man and Himself, He will fix an impassable gulf.

From all that has been said we may gather this: God means that the Gospel of Jesus Christ should make life more comfortable for the poor. Absolute equality is not the divine purpose. We learn that from the very words of Jesus: "The poor ye have always with you." But certainly God did not intend that the difference between the rich and the poor should be so great as the world now allows it to be and the selfishness of man tends to make it. He does not think it right that a man should be very rich while there are crying needs all around him to be relieved. "How hard," said Jesus, "is it for a rich man to enter

into the kingdom of Heaven"—not because he is rich, but because he must be hard and selfish and un-Christlike, if he continues very rich while there are open to him such multitudes of ways of using his wealth so as to elevate and brighten the lot of the masses. The Christian law of property is simply this: "I have given myself to Jesus Christ who has redeemed me. With myself must go my property; then I cannot dispose of it according to my own inclination and caprice. I use it as I think right, but the law of right I have learned from Christ. I spend it according to the desires of my heart, but my desires are fastened on Christ. I employ it to secure to myself the largest amount of enjoyment, but my highest joy is to bring glory to Christ." Thus in the Christian's relation to his property the selfish principle is altogether excluded. At every point—the mode of getting, the amount possessed, the manner of spending—he has to consider, not what will please himself, but what will glorify Christ.

Now suppose this teaching of Christ in regard to the use of wealth were really carried into effect, what would happen? For one thing, there would always be a fair supply of money for all the charitable enterprises, all the sanitary reforms, all the educational appliances, all the mission agencies which the world needs to-day. Probably in that case no man would continue enormously rich, though some would still be richer than others. The contrast would certainly cease to be so startling as it is at present. Therefore, according to the principles of the Gospel, all very rich men may conclude that they are so at the expense of some of their fellow-creatures. Then again, if the teaching of Christ about wealth were really practised, the bitterness now prevailing between the two great sections of society would gradually disappear. For after all, as was said before, it is not the inequalities of life which create the envy and bitterness, but the abuse of wealth, its reckless waste, the extravagance and luxury of many of its possessors. Any one acquainted even partially with the labor literature of the country, knows this to be a fact.* In the labor papers every public instance of selfish luxury, every sinfully extravagant ball, is sure to be denounced with an indignation

* See Prof. Ely's "Recent American Socialism," pp. 70-72.

born of a sense of injury. On the other hand, when Peter Cooper died, there appeared in a violent socialist paper, a thoroughly appreciative notice of his life. Wealth well spent is never an object of envy. Therefore, I maintain that Christianity alone holds the truth that will solve the problems which vex the world to-day.

EDWIN ARNOLD, POETIZER AND PAGANIZER.

[A Paper read before the American Institute of Christian Philosophy, 7th October, 1886.]

BY THOMAS J. SCOTT, D.D., BAREILLY, N. W. P., INDIA.

PROFESSOR WILKINSON has done a real service to the cause of truth, by his "examination" of Arnold's poem. Every attack on Christianity, direct or indirect, for a time gains a certain amount of applause, and for obvious reasons. Sceptical thought cannot abide the supreme and exclusive claim of Christianity. Anything that seems to disprove its claim, or sets up as rival to equality or superiority, secures for a time at least a measure of popularity in certain quarters. Arnold's poem capped the climax of a tidal wave that had been rising in favor of Buddhism. Books had been published in Germany displaying the remarkable coincidences between that system and Christianity, and the inference intended was that the latter system, being the younger, was the borrower. A newspaper stated that a Buddhist temple was about to be opened in Paris, for the devotion of occidental devotees of the Indian savior. The popular query was, what is this Buddhism, and the half-informed sceptical mind was inclined to believe that in it the source and perhaps the superior of Christianity had been found. "I have come home to find heathenism popular," said a returned missionary. At such a time how could Arnold's book, with its charm of poetry and sensuous portraiture, and glow of oriental imagery, be otherwise than popular? But the "examination" of sober thought came and in the critique of Professor Wilkinson we have the result. Truth never shuns honest investigation

and comparison, and the friends of the New Testament and the Faith of the Nazarene, have nothing to regret in this instance. It is not claimed in the review that the "Light of Asia" was intended by the author to wound Jesus, but many readers have found in it a rival to His claims.

Our reviewer examines Arnold's book from (1) the stand-point of art and (2) from the stand-point of historical faithfulness. Is the "Light of Asia" good poetry? and is it true to history? The bold conclusion reached is a negative to both these questions. The meretricious ornaments of poetry, and the glozing of the facts of history, have imposed on the reader. Professor Wilkinson is perhaps a little hypercritical sometimes on this poem, and, through not fully understanding the relation between Buddhism and ordinary Hinduism, holds the former more largely responsible for some things than he should. But on this point it must be remembered, as he himself tells us, that he studied the subject of doctrinal and historic Buddhism from a distance, and at second hand, from the best and only good authorities at command.

Taking up the art or poetry question of the book under review, Professor Wilkinson insists that it is not good composition, in the face of some high endorsement in England and America. As intimated, the glamour of gorgeous oriental imagery and the novelty and interest of a popular theme, have imposed on better judgment. The reviewer's decision is very emphatic: "The fact in one word is, that the versification of 'The Light of Asia,' is not good. There are parts of the poem, especially the fifth, sixth and seventh books, in which the versification is fairly correct, smooth and fluent. It even becomes, not seldom, decidedly grateful to the ear. But generally it is mere metre, without any such variety in movement and pause as is needful to make metre more than metre—rhythm also and harmony. This, where the metre is negatively good; but the metre itself is often not simply not good in a negative sense, but bad; and not simply bad, but flagrantly bad." He claims that he can quote page after page to prove his statement. The would-be poet has used a license, unlawful even for the license of his art. To illustrate, he has used an enforced accent to help

out his metre, to the scandalizing of all regular scansion. We are treated in the critique to an ample illustration of all this. We have numerous lines like these with their wrong accent:

“Gaped on the sword-players and posturers.”
 “Lord Buddha kept to all his school masters.”
 “Amid the blossoms of the rose-apple.”
 “Of beauty and the rosy breast-blossoms.”

The metre of the following lines is founded on a mistake as to the correct pronunciation of the words “seven” and “evening,” the *e* after *v* in the words being silent:

“And life is woe, therefore in sev-en days.”
 “Which fell: for on the seventh e-ven-ing.”

The reviewer's sharp eye detects some inaccuracies of thought and diction, for which even poetic license cannot be claimed. One of the characters of the poem is represented as hewing down two trees thus:

“Siddarta's blade shred at one flashing stroke,
 Keen, but so smooth that the straight trunks upstood.”

The “but” of the second line would seem to imply some opposition between “keen” and “smooth,” which is never the case. Again, Mr. Arnold on one occasion makes his “Light” say:

“Nay, if I had yon callow vulture's plumes—
 * * * *
 How would I stretch for topmost Himalay.”

Now the puzzle is how and with what a “callow (naked, featherless) vulture” would fly.

Again, good poetry should be actually or ideally true to facts or the nature of things. A passage is given to illustrate Mr. Arnold's license, which awakens a suspicion touching his understanding or trustworthiness as a delineator of reality. The scene is from agricultural life:

“All up and down the rich red loam, the steers
 Strained their strong shoulders in the creaking yoke
 Dragging the plows; the fat soil rose and rolled
 In smooth dark waves back from the plow; who drove
 Planted both feet upon the leaping share
 To make the furrow deep.”

Now, all this reads and sounds delightful, but is it true to any

reality? Is there any "rich red loam"? And if there is, how did it lose its color three lines below so as to roll from the plow in "smooth dark waves"? Besides, how could it roll "smooth" from a "leaping share," and how would the share leap behind the proverbially tardy "steers"? Moreover, the remarkable performance of planting both feet on the jubilant bounding share and thus ploughing, seems difficult of conception. The Indian plow, from the days of the "Light" to the present, is a rude implement, without "share" proper, and from the iron spike that tears or rather *pokes* the ground, no soil can roll in "dark waves back." The poet in his zeal for fine description has committed the mistake of transferring the beautiful modern, clean-cutting, wave-rolling plow of Europe to the ancient fields of India!

Besides all this and more serious, Professor Wilkinson holds that the poem is wanting in pure and refined taste. There is in it, for example, a fulsome, tawdry style that ill conceals its poverty of noble thoughts. Such adjectives as "jewelled," "sweet," "soft," "tender," "bright," "glad," "beauteous," "radiant," "rich," "stately," etc., recur incessantly. The reviewer has given a little comparative arithmetic of this matter. Arnold uses the word "jewelled" six times in his fourth book, while Milton and Shakespeare never use it, and Tennyson but once. There are only 4,500 lines in the "Light of Asia," against 10,500 in "Paradise Lost," and yet in the former poem, the word "sweet" in some form occurs 69 times, or once in every 65 lines, while in Milton's great work it occurs only 66 times, or once in every 159 lines. The adjective "bright" occurs in a number of Tennyson's works, making very much more matter than Arnold's poem, 28 times against 24. "Soft" occurs twice only in all Tennyson's poetry against 24 times in this one poem, and so on. This form of criticism has its value. One cannot resist the impression that there is a studied determination to make the "Light" as "sweet," "soft," "tender," "bright," "glad," "beauteous," "radiant," "rich" and "stately" as possible. In keeping with this thought, is the statement that the word "love," apart from its inflections, occurs about once in every 40 lines of this book, so that "the whole poem is fairly love-sick,"

while the original legends, be it noted, do not once yield the idea of real conjugal love! Is such a poem true to reality? The reviewer may well ask, "Is not the perversion monstrous?"

He makes a still more serious charge against parts of this poem. Its descriptions sometimes are in bad moral taste, although seeking to slur over the grossness and sensuality of the subject, of which Talboys Wheeler, in his "History of India," says, "The sensuality indicated in the text is almost incredible." Our poet gives us a description of Buddha's last visit to the palace before he departed to lead the complete life of an ascetic. We need not give the large quotation from Arnold, used in illustrating this point. Professor Wilkinson says of the picture, it is "a piece of bad morals—and bad taste on the part of the poet." That this "overcharged sensuous account," which is "a piece of bad morals" in spite of the skilful portraiture of the whole scene as one of innocence and love, is not true to history, appears from a reference to the original legend. In this, some of the 40,000 queens from whom the prince was about to separate, for a life of asceticism, that he might become Buddha (the knowing one), are thus spoken of: "Some were yawning, the dress of others was in great confusion, while others again were gnashing their teeth, or crying out in their sleep, or foaming at the mouth, or restlessly rolling their bodies and placing themselves in unseemly postures; so that the place, which a little time previous, appeared like one of the *dewa-lakas* (abode of the gods) now seemed like a charnel house." We read that Buddha was "disgusted with what he saw."

But we have already merged into the second part of our critic's work. Is this poem true to history? Is the Buddhism of this poem true to reality? It is claimed and proven by the reviewer, beyond honest contradiction, that what we find in Arnold's book is exaggeration and falsification. The appeal must be to the only histories and legends available, and from which, too, Arnold wrought out his poem. Translations and expositions of these originals have been made by eminent orientalists and students of the system. Confessedly the greatest is Spence Hardy, for long years a resident of Ceylon, the leading Buddhist country. Mr. Hardy studied and faithfully translated

the books constituting the sacred canon of the Buddhists. Dr. Rhys Davids, an eminent specialist in orientalism, and Professor Monier Williams, a profound student of Indian literature, and others, are authorities, laying bare the import of the originals, from which we must learn the *reality*. This we do not find in the "Light of Asia." To begin with, the Gautama of the originals is not the "Light" that Mr. Arnold makes him to be. Professor Wilkinson's charge is thus stated : "I shall therefore not say that Mr. Arnold with deliberate purpose takes biblical phrases, consecrated to the Christian imagination and to the Christian heart by association with Jesus, and transfers them by application to Gautama in order to cheat the surprised and bewildered mind into the half-conscious suspicion that, after all, Jesus was but one in a class, larger or smaller, in which Gautama was another and a peer. But I may say, and I will, that if Mr. Arnold had had such a sinister purpose, unconfessed, he could not have chosen a way better adapted than his actual, to accomplish it." Consciously or unconsciously, Mr. Arnold has simply put more into the legends than is in them, to make of his hero "the highest, gentlest and most beneficent with one exception." To illustrate, he has represented Buddha as loving his wife with Christian affection, and the great *renunciation*, so skilfully portrayed is in leaving this dear one for the life of an ascetic. But there is nothing of this in the legend. We there learn that he turned "disgusted" from his home, "roused to action like a man who is told that his house is on fire."

We are prepared, then, to understand that Buddhism, as a system, will not be faithfully revealed to us in this poem—but rather something over which the light of Christianity has been reflected through the author's imagination. Buddhism can be seen far more truly in the translation of a worker like Hardy, who gives us his method in the preface to his work :

" In the preparation of the present manual, I have kept one object steadily in view—What is Buddhism? A deep interest in the subject ; intense application ; honesty of purpose ; a long residence in a country where the system is professed ; a daily use of the language from which I have principally translated ; and constancy of intercourse with the srama priests, have been my personal advantages. I am not aware that I have omitted any great feature of the system. I have never willingly perverted any statement and have taken all practical methods to secure the utmost accuracy."

Buddhism as a system is largely a rehash of Hinduism, or more strictly speaking, of Brahmanism, with the oppressive system of caste theoretically ignored. In it the Brahmanic dogma of absorption reappears as *nirvān* or annihilation, if it be intended as anything intrinsically different from absorption. Fancied connection between Buddhism and Christianity has been traced. But two eminent authorities, Dr. Rhys Davids and Max Müller, give it as their decided opinion that there is no historic connection here, and, we may add, no connection at all, except as Buddhism must have some truth in it, and all truth is connected. Now, what is this vaunted system which it has become the fashion in certain quarters to laud as the almost-equal, if not equal or superior of Christianity? It is not a religion, for it is without a God and cannot have any real worship. It is rather a system of ethics with a philosophy of existence, and by its ethical and philosophical claims it must be judged.

There seems to be a kind of Buddhist decoulogue, which Mr. Arnold has in the last book of his poem wrought into lines, and which Professor Wilkinson tells us it is hard to discriminate from "mere and pure doggerel." As there given, they make a plausible showing for the system. However, when we turn to the faithful translation of a man who spent his life in studying the record, there we learn just what Buddhist morals are. We find that Buddhist precepts are rendered nugatory and impracticable by casuistry and Pharisaical refinements. To illustrate by two or three examples, first among Buddha's precepts, *no life is to be taken*. Murder as understood in the Mosaic prohibition is not here intended, but the taking of any life. There is no provision for capital punishment, and the destruction of all mere animal life, even of an insect, is forbidden. And note the casuistry woven about this precept: "If it is intended to take the life of a particular person, by throwing a dart or javelin, and the weapon kill another, it is not murder." "When a command is given to take the life of a particular person at a particular time—place—in a particular manner—by a particular weapon"—and the killing be done contrary to all this as to time, place, etc., "it is not murder." Again, take the prohibition on lying, to which, among other comments defining the essence of a lie,

and good enough, a third and fourth are added thus: (3) "There must be some endeavor to prevent the person addressed from learning the truth." (4) "There must be the discovery by the person deceived, that what has been told him is not true." The most glaring falsehood may become truth by such teaching, or at least it need not be deemed a lie.

One more illustration may be given concerning the mutual relation of the sexes. Numerous classes (not relationships) of women are mentioned who are not to be approached, and the whole comment leaves classes of women available to the evil-inclined. And then, "four things are necessary to constitute this crime: 1. There must be some one that it is unlawful to approach. 2. There must be evil intention. 3. There must be some act or effort to carry that intention into effect. 4. There must be the accomplishment of the intention." How infinitely is all this below the simple teaching of Jesus and His apostles. The reviewer well says, "Let Buddhist morality swim if it can, with such a millstone, tied in a knot that none will untie, about its neck."

It illustrates this question of Buddhist morality, to refer to the subject of woman in the system. Mrs. C. Stanton has recently sought, in the *North American Review*, to cast a reproach on Christianity by sinking it below other religions in its estimate of woman and treatment of her. In spite of Paul's seemingly hard sayings about woman and marriage, compared with Buddhism, his injunctions touching a gentle and tender regard for woman, and his acknowledgment of the labors of many women, who were his "helpers in Christ Jesus"—among them Priscilla who, with her husband, "laid down her neck" for Him; Mary, who "bestowed much favor on us;" Jania, "of note among the Apostles;" "beloved Persis which labored much in the Lord," with, "Tryphena and Tryphora (one or both ladies) who labor in the Lord." Turning to Buddhism, we find many hard sayings that cannot be harmonized with any proper estimate of woman. Indeed in a system which teaches that only when the sex, in the rounds of transmigration, is changed, can woman attain the highest good, how could the estimate of woman be other than it is? Specimens from Mr. Hardy show what

this estimate is: "Women are hasty, they are given to quarrel, they exercise hatred and are full of evil." Buddha said, "Any woman whatever, if she have proper opportunity, and can do it in secret, and be enticed thereto, will do that which is wrong, however ugly the paramour may be." Although there are precepts in Buddhism that inculcate a gracious bearing in the husband toward his wife, still, as can be plainly seen, it is the graciousness of a man toward "the woman whom he possesses," to quote from the literature, and implies inferiority in woman. In seeking the highest good, *nirvān*, be it annihilation, or the bliss as they deem it, of eternal unconscious rest, the candidate "must be a male and not a female." "He must avoid all sins that would cause him to be born as a woman."

It is manifest that the chasm of difference between Christianity and Buddhism, renders comparison ludicrous. Let any one seriously and honestly study the two systems, in the earliest documents of both, and he must be convinced that while the one seems divine, the other is of the earth earthy. The New Testament history and teaching are straightforward, simple, and sublime, the Buddhist legends and doctrines are hazy as well as wearisome in frivolous and impractical details. Jesus is peerless and supreme in simplicity, purity and majesty. Buddha is a dreamy recluse, of whom most trivial details abound in the legends, and yet whose very existence has been doubted.

As to the practical outcome of the two systems, it seems like the sheerest perversity that prevents one seeing, that while Christianity has blest and elevated nations and generations, this is just what Buddhism has failed to do. India, China, Japan—these have been the great fields of its operation—Japan is the last country into which it spread, and looking at its history and effects there Max Müller writes, "Surely Japan is ripe for better things." Setting aside the testimony of missionary workers in these great fields, it seems almost inexplicable, that by any ordinary mode of observation or interpretation of facts, any one cannot see how sad a failure Buddhism has been. On the other hand, even sceptical minds have been constrained to see in history the mighty work of Jesus on humanity. Lecky says of Christianity, "as a matter of fact, it has probably done more

to quicken the affections of mankind, to promote piety, to create a pure and merciful ideal, than any other influence that has ever acted on the world." According to the famous saying of Richter, Jesus, "being holiest among the mighty, and mightiest among the holy, has with that pierced hand of His, lifted the gates of empire off their hinges, has turned the stream of centuries out of its channels, and still governs the ages."

How immeasurably vast the difference in the answer these two systems give to the awful question of human destiny. The one can only hint at evolution through multiplied transmigrations; the very statement of them so absurd that the mind revolts from the representation. And in the end, the highest good offered, is not an existence of any positive worth, but the dismal blank of *nirvān*—some kind of nonentity. In contrast with this we have in the Christian system the simple idea of the one present practical holy life, leading to the conscious joy and noble activities of a blessed future life. The reviewer of the "Light of Asia," has made this book, and the system of Buddhism, look sorry enough. But he has not been unfair to the system, "the casuistry and trifling character" of which he could have more fully illustrated; but he forbore, as he tells us, out of "a consideration of mercy toward the reader." Of his treatment of it, he says, "Buddhism has no just cause to complain. So far from it, the system might easily, and that in consistency with truth, have been made to appear greatly more ridiculous." That there are truths in the system is simply saying that error is perhaps nowhere more "pure and simple." But to all whose whim of sentimentality turns their eyes to this poor, dim "light," the caution of the reviewer is timely: "How foolish to chant your ode to a meteor of the twilight when the great sun himself already sits half-risen on the kindled limits of the morning!"

REV. DR. HOWARD CROSBY said: There is a certain class that like to be queer, and they take up anything that is peculiar whatever it may be and advocate it. I have a friend in this city who, just from the love of the queer is a Buddhist, and goes about with long hair and a broad hat lecturing on Buddha. Another class likely to become Buddhists are romantic young

misses that are fond of the kind of sentiment that is vague, and like to get hold of anything shadowy, and think it very delightful. A third class love to be wicked, and Christianity requires a pure heart and they can't stand that, and they will go for anything that will let them be impure in heart.

I believe that these three classes comprise all the persons in England and America who profess to have become so passionately fond of late of Buddhism. I think you will find that those who live in the light of day are those who love Christ and love Christianity.

In examining the various religions of the world I have never found anything in any of them that looks like Christianity. Confucius said, "do unto others as you would that others should do unto you," but further on he says "kill your enemies if you can ; if you can't kill them, harm them in any way that you possibly can." Thus he confined the doing of good to the Chinese, and told them to kill the rest of the world.

REV. DR. DEEMS said : There are those who desire to be atheists and yet have some kind of religion. Buddhism suits them exactly. It seems to be a religion. If it is a religion it is entirely godless. If I wanted to propagate Atheism it would be under the guise of Buddhism.

IT is no use to say that Christ, as exhibited in the Gospels, is not historical, and that we know not how much of what is admirable is superadded by the tradition of the followers. Who among His disciples or among their proselytes was capable of inventing the sayings ascribed to Jesus, or of imagining the life and character revealed in the Gospels? Certainly not the fishermen of Galilee; as certainly not St. Paul, whose character and idiosyncrasies were of a totally different sort; still less the early Christian writers, in whom nothing is more evident than that the good which was in them was all derived from the higher source.—*John Stuart Mill, Three Essays on Religion, p. 254.*

HEREDITY, NOT FATALISM.

[The following forms the conclusion of a masterly essay on Social Psychology, running through several numbers of the *Revue des Deux Mondes*.]

TRANSLATED BY THE LATE J. G. WILSON, D.D.

I WOULD sum up the conclusions of this long study, mass them under the eye of the reader in a few propositions very simple and very clear:

In the psychologic order, heredity is an influence, it is not a fatality. It penetrates the very centre of our inner being by our instincts, race characteristics, physiological impulses and enticements. But, save in morbid cases, it does not so dominate the moral personality as to dispossess it of itself and to create irresponsibility. Yet although it be only an influence, or rather a combination of influences, heredity ought to be guarded with the utmost care, combated and repressed as far as possible, that it may not become too heavy a weight upon the life of our successors. It creates between the generations a law of solidarity which doubles our duties towards ourselves by adding those towards our descendants. We are responsible in a certain measure for them. A man may compromise the moral soundness of his children or his grandchildren in many ways, not only by a veritable and involuntary folly which has many a chance of transmitting itself, but by some germ of mental malady which he should have effectually combated; by marriage consummated in violation of the laws of a sound physiology; by habits of intemperance which produce perturbations profound, and, as it were, the anticipated depravation of the child conceived under such conditions; it may be even by excess of toil producing fatigue of the brain; or in fine by a too complaisant culture of eccentric sentiments; by an habitual exaltation or melancholy, in which one may be placed, like Hamlet, to sport with folly. It is cause for trembling to think upon all the diverse forms of responsibility which

weigh upon us in regard to the future history of our race. A vice, a *penchant* contracted, may have a considerable reverberation in that future which we shall not personally know. And, in like manner, good habits, a relish for noble and pure sentiments, a lofty cultivation of the mind, and an assiduous discipline of the will, may modify most happily one's nature, even the temperament which is transmissible. There is then a power of transmitting evil which depends upon ourselves, a sort of original sin, physiological or instinctive, which we may transmit diminished or enfeebled. Ancestors who shall remain unknown to their descendants and who themselves shall never know these, the men of each generation, are not thereby the less bound in regard to them by the laws of justice and of charity. It is absolutely necessary that this class of considerations shall enter into our moral education. We have good reasons for saying that, amid all the influences which affect man, one of the most powerful is *the dead*. One long since passed away weighs upon us. It depends upon us that the present, which we are fashioning, shall weigh with a less heavy weight upon our descendants, or thus, at least, we make the task less difficult than it has been made for us of ameliorating, as far as that is possible, everything around us and the moral nature within us.

Without denying any of these influences, we have looked them in the face, taken their measure, and after having marked out their place in life, we have essayed to limit them. We have endeavored to prove that there is in every living being an element of individuality which escapes the law of heredity, and which in man exalts itself to personality. The making man free is the end of life. Man is then something more than the fragile product of the interaction of commercial forces. He is a being distinct from every other being, and capable of indefinite development by conscience and liberty. Despite all the fatalities which we encounter from without or which we bear within ourselves, the biologic school has never succeeded except by tricks of logic and analysis, in disembarrassing itself of this personal power. This element, irreducible into any other, manifests itself in every free act, which is a protestation against the law of heredity, which suspends or suppresses it in all the really moral circumstances of

life, which commences new series of phenomena not foreseen, which, in fine, creates responsibility by rejecting the too facile excuses of a lazy fatalism. It manifests itself in education—that which we give ourselves, and that which we receive from others, which last is a double act of volition, the action of another's will upon our will. It shows itself in the formation of character, which is in part the work of the man, the expression of his moral life, the living history of his struggles and his trials. It has its part in the institution of privileged classes, in the selection of the courage or the merit which found them, and also in the decline which drags them down to ruin, and in which it is rare that there are not some grave faults or failings to note in those who compose them. Finally the most undeniable manifestation and the most notable of this element of human personality, its social revelation, is the very history of progress. Heredity all alone explains nothing but the transmission of an acquired state; the most considerable collection of phenomena of which it can render account is civilization, that is to say as it has been well defined, the *balance-sheet of a society at any given moment*, what it has that is solid, fixed, in store, in a word, of ideas, of sentiments, of institutions, its industrial capital, scientific and moral. Heredity is a power of stability, of conservation, not of acquisition; it is the instrument *par excellence* of civilization, it is not the faculty of progress. That which explains progress, or the contrary, that is to say the acquisition of a new state, of a new style of art, of industry, of science, is the effect of each and all determining a forward march, a movement. It is a grand initiation which has succeeded. The civilizations which no longer advance [and we may say the Churches, also.—TR.] are those which are saturated to excess with heredity, with tradition and with routine. So soon as effort stops, mobility and life cease, stagnation commences, decadence is near at hand. The role of these two principles is thus sharply marked. In the intellectual and social order, heredity conserves; it is liberty which creates in the struggle for life. The future is for the individuals and the people who know how these two forces unite, and harmonize them in a durable action—the initiative faculty and respect for the past.

VIEWS AND REVIEWS.

THE COOLING PROCESS.—The following question was recently addressed to Prof. Charles A. Young, of Princeton: "It is from time to time asserted or intimated that the sun and all the planets in the solar system are undergoing a cooling process. Is that true? If so, upon *what known* facts is the statement founded?"

Prof. C. A. Young kindly sends his reply to CHRISTIAN THOUGHT. It is as follows: "It would be perhaps too much to assert positively that all the planets are 'undergoing a cooling process,' *i. e.*, sending off more heat at present than they receive: as to the *sun* (and *all* suns, *i. e.*, *bright stars*) there can hardly be a question. Bodies whose temperature is *higher* than that which corresponds to the ultimate equilibrium of temperature *must* be losing more heat than they receive. Of course, however, it does not follow that their *temperature* is falling, if at the same time they are diminishing in size. In the case of a *gaseous* body, shrinking from loss of heat, we know that the *temperature must rise*.

"But we are not able to show *by actual observations*, that the mean temperature of the earth or of any heavenly body has actually changed within the *historic period*; and we do know, from the poor conductibility of earth and rock and from the law of rising temperature as we go below the earth's surface, that the amount of internal heat which *comes up*, can but little if at all exceed the amount of solar heat which *goes down*; so that the excess of heat, if any, which is lost by the earth must be very small at present. Still earthquakes and other geological phenomena rather indicate that the earth has not finished shrinking, and this favors the idea that there is a balance of loss against us yet."

BRIEF STATEMENTS.—To one who desires brief statements of the basal philosophic ideas of modern philosophers, perhaps the best that can be given at present is the following:

Locke taught that all our *ideas* come from *experience*.

Hume held that that was true not only of our *ideas*, but also of our *faculties*; that impressions are ultimate, that our experience is the result of our sensations, modified by association and custom: hence he drew the inference that we can take no cognizance of what transcends experience, if there be any such thing. Hence, he logically rejected religion and metaphysics.

Kant tried to show that whenever reason went outside of experience, as it did in considering problems which involve the infinite, it falls into irreconcilable contradictions. He agreed with Locke and Hume that knowledge begins with sensations, but he held that these are formed into objects of perception by means of independent functions of the reason. He rejected the opinion of Hume that impressions are ultimate. He held that the impressions of sense imply some cause outside our consciousness. The absolute *reality* is in the thing *per se*, which causes the perceived thing.

Spencer follows the psychology of Hume and the metaphysics of Kant. As to the phenomenal world he sides with Hume; as to the ultimate cause, with Kant. The ultimate cause he holds to be unknowable.

A FALSE MAXIM.—The following was prepared for CHRISTIAN THOUGHT by Judge Fancher, of the City of New York: "I received your kind note in which you ask whether the maxim, as it is called, that '*it is better that ninety-nine guilty men escape than that one innocent man should perish*'—is a truth or has a tenable ethical foundation. I answer, unhesitatingly, no. I doubt if the oft-quoted expression has any intelligent acceptance as a *maxim*. It finds no place in the hundreds of *legal maxims* that judges and lawyers refer to; nor has it any basis of claim for the guidance of judicial inquiry. It is a sort of impracticable utterance that has little wisdom in it. No case has ever arisen where it could be adopted or applied. The scales of justice were never poised so as to bear the guilt of ninety-nine men in one balance and the innocence of one man in the other. The attempt to give the expression a place either in pure or applied ethics would be a failure. It is quoted sometimes by lawyers in

defending persons accused of crime, in the hope, I suppose, that it may act like a palsy on the better sense of the jury; but it comes from the dim recesses where the owls and bats of the world try to find refuge. It is not sanctioned by the voice of natural or moral reason."

SIR WILLIAM DAWSON.—The British Association this year held its meeting at Birmingham, England, beginning September 1st. The President was Sir William Dawson, Principal of McGill University, Montreal. His subject was the "Atlantic Ocean." We have not space for even a brief summary, but it is to be noticed that in it occur such expressions as the following. After speaking of departed *savants* he says: "Let us follow their example and carry on their work as God gives us power and opportunity, gathering in precious stores of knowledge and of thought in the belief that all truth is immortal, and must go on forever bestowing blessings on mankind." Again: "It is ours to take advantage of this precious time of quietude and to extend the blessings of science and of our Christian civilization from shore to shore until there shall be no more sea," etc. Again: "The vastness and the might of the ocean and the manner in which it cherishes the feeblest and most fragile beings alike, speak to us of Him who holds it in the hollow of His hand, and gave to it of old its boundaries and its laws." When such a man as Sir William is elected President of the British Association and when he utters such words without creating sneers, it ought to make all men feel that the old faith is still alive, notwithstanding agnosticism and materialism. It is reported that the news of our American earthquake reached England almost immediately after the address was delivered and that Sir William said it had destroyed half his address. If this be true, it is like the frankness of a true *savant*, such as Sir William is on all hands acknowledged to be, and will not diminish the respect in which his intellect, his character and his attainments will be held. There *are* scientific men who, having made their utterances against which an earthquake had protested, would have thought, if not said, "So much the worse for the earthquake."

ENCOURAGING.—In colonial times, nearly every young man was an infidel, but now Colonel Ingersoll is the single champion of atheism against 70,000 ministers of the Gospel and over 800,000 Sunday-school teachers. — Scientific men are often spoken of as anti-Christian, if not atheistic, in their sentiment, but at the recent Saratoga gathering of the American Association for the Advancement of Science they held a prayer-meeting in the Y. M. C. A. building. It was well attended, led by Prof. Robert Maxwell, of Ohio, and heartily participated in by many of the scientists. One of them uttered this significant remark, that "the geological hammer could never break the Rock of Ages!" — The Gospel is preached in the United States by members of the Lutheran Church in thirteen different languages. — The statistics of the Protestant Churches of Japan for 1885 have just been published. The following is a summary of the principal items: Number of local churches, 151; gain during the year, 18; number of baptized persons, 11,602; number of baptisms in 1885, 1,902; contributions, \$23,406; increase over 1884, \$6,415. — The sum raised for missions by all the European and American Churches is \$13,375,000. Of this the United Kingdom raises \$6,005,000.

COURSE OF READING IN PHILOSOPHY.—The announcement in Vol. iv., No. 2, of a Course of Reading in Philosophy has excited much interest. For circular address Mr. Davis, Secretary, 4 Winthrop Place, N. Y. We make the following extracts from letters:

Rev. Dr. Brackett, Charleston, S. C.: "This enterprise meets my most cordial approval and will receive my most earnest support."

Rev. F. W. Lowber, Ph.D., Paducah, Kentucky: "I am glad to see that there will be established 'A Course of Reading in Philosophy' in connection with the 'American Institute.' I expect to read the course. It ought to be a two years' course, about what is required for the degree of Sc.D. in the University of Edinburgh. It can be made a grand success."

"A BUMBLEBEE'S THOUGHTS."—The following extracts are

taken from Theodore Parker's bright paper entitled "A Bumblebee's Thoughts on the Plan and Purpose of the Universe":

"On the 21st day of June, in the year 1,000,617 before our era, there was a great Scientific Convention of Bumblebees (*Apis Bombax*) in a little corner of a valley in the Jura Mountains." At the close of the convention, the various sections assembled to listen to an address from the President, the most distinguished *savant* in the world of Bumblebees. Through orderly, logical steps, the eminent *savant* led his delighted auditors to this conclusion: "Such, gentlemen, is the Purpose of the World—the Bumblebee. . . . Our thought is the standard measure of the world of things. . . . The Bumblebee consciousness is the true macrocosm, the real great world. . . . The possibilities of mind and matter are exhausted in the Universe, and its plan and purpose in the Bumblebee. But gentlemen," the orator proceeded, "there is one faculty of our multiform consciousness I have not named as yet, though I think it the greatest of all. I mean the power of criticism. Let me apply this highest faculty of the Bumblebee to the Universe itself, for that is the proper object of our criticism. . . . For a grasshopper or even the largest beetle to criticize the Universe it were ridiculous. But for us, gentlemen, the Universe lies below the level of the Bumblebee's consciousness; we look down thereon and pass judgment." He then alluded to his own peculiar qualifications for such criticism: his great age—"I have buzzed four summers;" his wide travels—"I have been up to the highest fir-tree, yea have flown over it and touched the sky;" all which qualifications warranted him in saying, "If I am Judge of anything, it is of the Universe itself." His judgment he thus declares: "Of the Universe in general, I say, I like it. I admire its plan, I comprehend its wisdom and rejoice in it. . . . However, it is not so large as we have commonly supposed and not so wonderful. But, gentlemen, when I come to speak of its parts, I confess I have my reserves; I cannot approve of all things in it."

This omniscient Bumblebee then proceeded to point out some of the defects of creation. "Too much time was consumed in preparing for our race. The Bumblebee might have existed 2,000,000 years before he did, and all that time was lost. I

find fault also with the proportion of the seasons; the summers are too short, the winters are too long and cold. The trees are too tall, such, I mean, as bear the most valuable flowers. Why must the Bumblebee fly for his daily food to such an exceeding height? The conditions of life are too difficult. Why does not honey run all day in any place, or fall each night like dew? Why must we build our houses, and not find them built? Why is so much of our time consumed in these mean evils, which are only for this vile body; and why is there so little left for science and for criticism of the Universe? Yes, gentlemen, I confess it. This is a hard World to live in! It is needlessly hard!" The eloquent orator thus closed—"Such, gentlemen, is the Universe, such its parts, such its purpose and plan. Such also are its defects, and such is the proved pre-eminence of the Bumblebee, who is not only its crown and its completion, but who can enjoy and comprehend it all, nay, can look beyond and see its faults, and find a severe and melancholy pleasure in thinking that it might be better made."—THEODORE PARKER'S "Works": XII., pp. 150-164.

THE *Spectator* (London) has the following acute estimate of Renan: "M. Renan, though he encourages people to cherish illusions which they know to be illusions, is very eager to insist on a kind of learning which shall go hand in hand with imagination, and which shall undermine convictions which claim to be built on anything but the vagaries of romance. Exact knowledge, adequate for the purposes of scepticism, he rates almost as high as he does the mist of sentiment which is to succeed to the inheritance from which every genuine faith is to be ousted. The gift of learning is necessary in order that serious belief may be compelled to give place to conscious romance; but the gift of romance is necessary in order that learning may not exhaust the air in which alone the mind and heart can live. Such appears to be M. Renan's thought, and he felicitates himself on having manifested the exact compound of learning with delight in illusion, which first undermines austere creeds, and then fosters mild superstitions in their place. A superstition that does not impose itself on others, but just amuses us with its glimmering of moral

foreboding, is M. Renan's beau-ideal of religion. 'Sublimate your faith into legend, but saturate yourselves with the legend, even so far as to mould your action after your conviction is gone'—that is the upshot of M. Renan's teaching; and he flatters himself, not without justice, that he has embodied that teaching in his life. We believe he has; that his honeyed words have not only robbed his readers of much truth, but soothed them into acquiescence in an airy and fanciful suspense not inconsistent with epicurean enjoyment. He could hardly have done more than he has done, first to undermine a true creed, and then to lull to sleep the wild cravings by which unbelief is sometimes brought back to faith."

"CONSPECTUS OF THEORIES OF THE ORIGIN OF SPECIES."

—The following "Conspectus" taken from Prof. Winchell's work on the "Doctrine of Evolution," etc., shows the great variety of opinion among scientific men, as well as others, on the subject of Evolution.

I. IMMEDIATE CREATION:

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| 1. In single pairs, | Popular Opinion. |
| 2. In colonies, | Agassiz, etc. |

II. MEDIATE CREATION OR DERIVATION:

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| 1. Through a force, which is a mode of the Unknowable, | Herbert Spencer. |
| 2. Through external forces. | |
| (a) Physical surroundings, | De Maillet. |
| (b) Conflicts of individuals, or " <i>Natural Selection</i> ," | |

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|---|--|
| (1) By insensible gradations, | Darwin, Haeckel, Chapman, Gegen- baur, Wallace, etc. |
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|---|---------|
| (2) With occasional leaps (<i>Saltative</i>), | Huxley. |
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| 3. Through an internal force, influenced by external conditions. | |
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| Perpetual effort to improvement (<i>Conative-variative</i>), | |
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| | Lamarck, Geoffroy, St. Hilaire, etc. |
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| 4. Through genetic processes exclusively (<i>Filiative</i>). | |
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| (a) Prolonged development of embryo (<i>Variative-Filiative</i>), | "Vestiges of Creation" [Robt. Chambers]. |
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| (b) Accelerated development of embryo (<i>Variative-Filiative</i>), | Hyatt and Cope. |
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| (c) Extraordinary births (<i>Saltative-thaumogene</i>), | |
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| | Parsons, Owen, Koelliker [Dalton], Mivart, etc. |
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|--|--------------------|
| (d) Partheno-genesis—virginal births (<i>Saltative-filiative</i>), | Ferris, Koelliker. |
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MONTHLY MEETINGS.

BY THE SECRETARY.

THE regular meetings of the Institute are held on the first Thursday evening of every month, from October to June inclusive, at No. 4 Winthrop Place, New York; and all visitors are welcome. At the first one of the season of 1886-87, held October 7th, with the President, Rev. Dr. Deems, in the chair, the devotional exercises were led by Rev. Dr. Howard Crosby. After the reading of the minutes of the last meeting, the following names of new members were read by the Secretary :

Henry B. Hudson, Brooklyn, N. Y.; John N. Waddel, D.D., LL.D., Clarksville, Tenn.; J. B. Wentworth, D.D., Buffalo, N. Y.; Prof. E. E. Hoss, D.D., Vanderbilt University, Nashville, Tenn.; Prof. Thomas S. Powell, M.D., Atlanta, Ga.; J. Fred. Dripps, D.D., Philadelphia; Mrs. J. F. Dripps, Philadelphia; Albert L. Turner, M.D., New York; Prof. Benjamin C. Blodgett, Northampton, Mass.; Rev. Albert G. Ball, A.B., Melrose, Mass.; Pres. Archibald J. Battle, D.D., LL.D., Macon, Ga.; C. R. Blackall, M.D., Philadelphia; Rev. James W. Lowber, M.A., Ph.D., Paducah, Ky.; Prof. Wm. M. Boskerville, A.M., Ph.D., Vanderbilt University, Nashville, Tenn.; Rev. Valentine F. Bolton, A.M., Glen Gardner, N. J., Ira B. Burt Williamsport, Pa.; James Morrow, D.D., Philadelphia; D. H. Burrell, Little Falls, N. Y.; Henry A. Fairbairn, M.A., M.D., Brooklyn, N. Y.; John G. Wilkinson, Newburgh, N. Y.; Rev. Joseph H. Johnson, Detroit, Mich.; William H. Robertson, New York; Daniel B. Clark, St. Louis, Mo.; E. Payson Porter, Philadelphia; Irving Magee, A.M., D.D., Rondout, N. Y.; Rev. R. A. Paterson, A.M., New Rochelle, N. Y.; Miss A. M. Myers, Philadelphia.

The regular paper of the evening was a Review of Prof. William C. Wilkinson's book, "Edwin Arnold as Poetizer and Paganizer," by Rev. Dr. Thomas J. Scott, Principal of the Bareilly Theological Seminary, at Bareilly, N. W. P., India. The author having returned to India, the paper was read by the

Secretary. Prof. Wilkinson was present and stated the cause and circumstances which led him to write the book. The subject was discussed by Rev. Drs. Howard Henderson, Howard Crosby, James L. Sherwood and Charles F. Deems, and H. C. Vedder, Esq.

The second monthly meeting was held Nov. 4th, 1886, the President in the chair. Devotional exercises were led by Vice-Chancellor Henry M. MacCracken, of the New York University. The minutes were read and approved.

The following members are reported to have joined since the October meeting, viz.: Hon. Andrew J. Colvin, Albany, N. Y.; James Bell, Esq., Orange, N. J.; George M. Everhart, D.D., Montgomery, Ala.; John H. Brunner, A.M., D.D., President Hiwassee College, Tenn.; Edward H. Jewett, S.T.D., Norwich, Ct.; George Buckham, A.M., New York; Rev. William V. Kelley, D.D., Middletown, Ct.; Prof. William Cleaver Wilkinson, Tarrytown, N. Y.; Rev. James M. Whiton, Ph.D., Tremont, N. Y.; John W. Rounsville, Esq., Rome, Ga.; Rev. George B. Stevens, Ph.D., D.D., Prof. Yale College, New Haven, Ct.; Charles L. Colby, B.P., President Wisconsin Central R. R. Co., Milwaukee, Wis.; James H. Fletcher, Esq., Newark, N. J.; A. Wilford Hall, LL.D., Editor *Scientific Arena*, New York; Rev. R. S. MacArthur, A.M., D.D., Editor *Baptist Quarterly Review*, New York.

The President called the attention of the meeting to the School of "Correspondence Instruction in the Elements of Philosophy," which has just been established by the Institute.

The regular paper of the evening was by Rev. Charles E. Lord, D.D., of Newburyport, Mass., whose subject was "The Relations Sustained by the Miracles of Christ to the System of Christianity."

Rev. Jacob Freshman, pastor of the First Hebrew Christian Church of New York, expressed his high appreciation of the force and importance of the argument, especially from the stand-point of a Hebrew.

ABOUT BOOKS.

[In this department we shall make mention of recent publications, especially those in the line of our studies. There will not be space for extended review. The name of the book, its publisher, and its price when known, together with a brief statement of its drift will probably meet the demands of our readers. Any book mentioned will be sent post-paid, on receipt of price, by WILBUR B. KETCHAM, 71 Bible House, New York.]

“GOSPEL FAITH COMMENDED TO COMMON SENSE.” By John Leighton, D.D. (Funk & Wagnalls. Price, 75 cts.) In the immediately preceding number of *CHRISTIAN THOUGHT* there was noticed a book on the “Jewish Altar,” by Dr. Leighton. We did not know who he was, but were struck with the ability the book displayed. This book on “Faith” we have read with very great interest. It seems just the book to put into the hands of such worldly or doubting men as have brains and principle, men who cannot endure pretence, or cant, or other nonsense. To pastors it will be a great help in that direction. We know nothing better. It is manly in its tone and robust in its reasonings, a very valuable contribution to the defences of the faith. The announcement in a note to the preface that Dr. Leighton had died before giving this book to the press, led to inquiry which enables us to give the following information, which we trust will be interesting to the readers of his books. He was a Presbyterian minister, who went to Missouri very early in its history and who preached for seventeen years in the city of Palmyra; thirteen years in the city of Hannibal, Marion County, Missouri, and for six or seven years at Rockhill, a suburban town near St. Louis. He was a great student, a peculiarly diffident man, a man of great literary attainments and one who stood high with his clerical brethren in the State of Missouri. He left a number of books: “Jewish Altar,” “Gospel Faith,” “Doctrine in Religion,” “Commentary on Ephesians,” “Demonology in the Bible,” and others—the last mentioned in an incomplete state, the others complete. Both works, the “Jewish Altar” and “Gospel Faith,” are printed exactly as they left Dr. Leighton’s pen, with-

out any editorial interference. He regarded the "Jewish Altar" as his best work. Dr. Leighton died about a year ago in St. Louis at the age of seventy-two years, having been continuously in the ministry for nearly half a century. His friends think that the reason he did not publish his books was largely owing to his timid reserve.

We think the "OUTLINES OF PSYCHOLOGY," by Mr. James Sully, is taking the front rank in books upon this subject. We can only say this much, for we have never seen a book on psychology to suit us, and we have inquired of a large number of professors in our colleges and we cannot find a man that is ready to give us unqualified recommendation of any book in this department. Although there seems to us to be some things not quite clearly stated; as, for instance, in regard to punishment and conscience, nevertheless the book, upon the whole, can be confidently recommended to beginners in this department as a very excellent basis for their studies. D. Appleton & Co. Price, \$3.00.

Last spring Prof. Bruce, of the Free Church College, Glasgow, delivered a series of lectures before the Union Theological Seminary, on the Ely foundation, the subject being, "THE MIRACULOUS ELEMENT IN THE GOSPELS." These admirable lectures seem to answer every question raised in modern times on the subject of miracles. The clearness and fulness of the discussions give to this handsome volume a great value. It will receive the attention of all scholars and students who are interested in Christian apologetics. A. C. Armstrong & Son. Price, \$2.50.

"A HISTORY OF GREEK LITERATURE FROM THE EARLIEST PERIOD TO THE DEATH OF DEMOSTHENES" (small octavo, 509 pp., \$2.50), by Frank Byron Jevons, Tutor in the University of Durham, is republished by Charles Scribner's Sons. The author intended this book for the use of students in the higher seminaries and universities, but we cheerfully commend it also to general readers as a book which will give them in compact

form such a view of Greek literature as will prepare them to appreciate allusions to it in current literature. Mr. Jevons' volume is not a dry catalogue of names and books, nor is it a long drawn dissertation. With great mastery of the subject the book gives an admirable history of the rise and growth of the epic, lyric, and the drama, then of history, oratory, and philosophy; and, finally, a consideration of the circumstances amid which Greek literature grew. A very excellent volume.

“OUR COUNTRY; ITS POSSIBLE FUTURE AND ITS PRESENT CRISIS,” is the title of a book published by the American Home Missionary Society. It was written by Rev. Josiah Strong, of Cincinnati, Ohio, with an Introduction by Prof. Austin Phelps, who characterizes it as a “powerful book.” It is such. The writer of this notice had a copy handed him one morning last summer in Indiana, and became so absorbed in it that he gave a whole day to its study. Its power lies in the skill in which its verified facts are marshalled and marched like an army. *No pastor in the land should cease urging it upon his people until every Christian shall have read it.* It seems to us the most important book which has been issued in this decade. It is published by the American Home Missionary Society. The price is fifty cents in cloth, and twenty-five cents in paper.

We wish to make very emphatic recommendation to our readers of “PRAISE SONGS OF ISRAEL.” This is a new rendering of the book of Psalms by the Rev. Dr. DeWitt, who was a member of the American Old Testament Revision Committee. It is published by Funk & Wagnalls. We venture to say it is altogether the very best translation of the Psalms extant in the English tongue; and we believe there cannot be any scholar in America whose opinion will differ from this verdict. This is strong language, but it is uttered after months of use of this admirable book. Price, \$1.50.

A book, which is to be sold by subscription only, is published by Wilbur B. Ketcham, 71 Bible House, New York, entitled “THE ROYAL GALLERY OF POETRY AND ART.” It

deserves its name. It is an illustrated book of the favorite poetic gems of the English language, taken from the choicest productions of authors, living and dead. It has been described as "the heart of English literature in one volume." The paper is excellent and the illustrations ample and superior, many of them exquisite. Two friends have examined it to see if a single favorite poem of our childhood would be missing; they were all found. The indexes are excellent. There are added 400 brief biographies of authors. Rev. Dr. Milburn, Chaplain to the National House of Representatives, furnishes a glowing introduction. Now, it amazes us how such a book, quarto, 542 pages, superior paper, 400 charming illustrations, admirably tasteful editing, and attractive binding, can be furnished, by subscription, for \$2.75. It will be an ornament to the library of any Christian household.

Dr. Talmage has authorized Mr. E. B. Treat to select and publish from his writings a volume entitled, "SHOTS AT SUNDRY TARGETS." The result is a handsome volume of 656 pages of short bright articles such as Dr. Talmage is continually producing. Price, \$2.00.

The article of Prof. J. G. Lansing of the Theological Seminary at New Brunswick, N. J., on the aid given by a knowledge of Arabic to the study of Hebrew, made a great impression, and increased the revival of interest in Shemitic studies. The Professor has had great experience in the Seminary and in the Schools of the Institute of Hebrew, in which, during the past summer the advance sheets of his "ARABIC MANUAL" have been used and greatly commended. It is now published by the American Publication Society of Hebrew (\$2), and is the first Arabic Grammar published in America. It is admirably printed, an important thing in a book of this kind. It is orderly, concise, and thorough. Special treatment is given of the three short vowels which constitute the key to the logic of the Arabic language. We know nothing to take the place of this Manual.

CHRISTIAN THOUGHT.

THE MISSION OF MUSIC TO MIND AND HEART.

[A Lecture delivered before the Summer School of the Institute,
at Key-East, N. J., 18th August, 1886.]

BY PROF. BENJAMIN C. BLODGETT,

Smith College, Northampton, Mass.

THE subject of this address is one which, until very recently, has excited no especial attention outside the ranks of professional musicians in our country. At the opening of this century the practice of music in America was almost wholly limited to the horn-pipe, sacred and secular, while among cultivated people, the old Puritan motto, "A Christian maiden should not even know what a flute or a lyre is," seems not at all to have been outgrown. Since that time the development of music, both as art and science, in all the civilized world, is one of the marvels of modern history; and in no other land has it been as pronounced (especially during the past twenty-five years) as our own. The English taunt of a quarter-century ago, "Who reads an American book?" is no more decisively answered than the German taunt of the same date, "What do Americans know about music?"

Step by step, from the meagerest and most unpromising beginnings, musical taste has advanced quite to a level with that of the Home of Song itself. Whereas forty years ago no appreciative hearing could be secured in the largest of our cities for the masterworks of Bach or Beethoven, no one of these works to-day is better known in Germany than here, while the greatest artists of the world have come to regard the approval of the American public the chief prize to which they may aspire. Not-

withstanding all this growth, however, both in the love and the practice of music, there has been but very slight inquiry among us into the meaning and value of it all. It is generally accepted by intelligent people, I think, as in some way an indication and a means of culture, but a very little investigation has sufficed to show that the comfortable opinion is not based upon any understanding of the rationale of the art. It must be confessed that much of the prevalent music is largely to blame for this condition of things. The music that we have most frequently heard, and do still most frequently hear, in the ordinary concert-halls, sea-side hotels, and even in the home and the church, whether more or less pretentious, is unworthy of serious thought. It is only to be classed with the pitiful strains of the hand-organ, having as little sympathy with true music as the silly crudities of Hans Breitmann have with true poetry, the rantings of a Chicago anarchist with true oratory, or the daubings on fence and rock all along the line of our railroads with the art of Titian and Turner. I do not deny that this so-called music may have a certain sort of value; it adds to the atmosphere a kind of sensuous exhilaration, under some circumstances and with some natures, which is not wholly to be despised—but the effect is purely sensuous, not at all spiritual.

There are also certain varieties of music which are forced upon public attention as still more powerful and determined influences upon the feeling and thought of men; as, for instance, military music, which has more than once in modern history nerved soldiers to seemingly impossible heroisms of thought and act, and, as at Inkermann, in 1854, repeated before our eyes the ancient miracle of Jericho falling before the trumpet-blasts of its assailants. It is in this way also that the music of the ball-room has worked its way into the highest favor with the votaries of pleasure, because of its seductive power to create and intensify the sentiments and desires that gather about the dance. Even sacred music (or music that is called sacred because of its association with sacred words) is valued by very many people—shall I say the majority of us?—only because it seems to contribute an element of interest to the services of worship that is purely sensuous, or, at the best, only æsthetic, in the commonest use

of the term. In a little different line, but still belonging to this class of testimony, is the prevalent opinion of physicians, that certain qualities of music are of value in quieting perturbed conditions of the nervous system, and the belief of some writers that certain strains of music have the effect upon them of stimulating mental activity, clearing away mists from before the eye of the imagination, and assisting in the production of reliable and satisfactory intellectual work. My study, at one time, joined the laboratory of a good friend, a chemist, who assured me, with benignant expression of compliment, that my performances upon the piano were of great assistance to him in the most difficult and unutterably offensive of his operations.

But, valuable as these and other applications of music may be, capable, when carefully studied as to the secret of their influence, to contribute more or less of illustration to our discussion, I do not concern myself with them at all, here and now, but rather with the essential relation of music to man's mental and spiritual being that underlies these, as also all the higher phenomena of art-influence exerted by it—a relation *complemental*, not *supplemental*—in some sense, as in physics the interblending of the rays of solar light is related to the eye, or the sounds of the common chord are to the ear; a relation, in the recognition of which lies the only basis for a true theory of music, or of the finest processes of culture that have been achieved by it.

One of the most significant and valuable of recent utterances in the line of this general statement is, the address of Dr. Munger, entitled "Music, a Revelation of God and of the Future," delivered before this Institute a year ago. In this address it is urged with great force that as science is the revelation of truth and law, to be received by man's reason, so sound is the revelation of feeling to be received by man's emotional nature. A world governed by a capricious Deity would be divested of the possibility of a science, and so music could never exist in the realm of a God without feeling, without sympathy, without love. It is not asserted that impressions received by the eye or the touch are incapable of awakening emotion, but it is asserted that the intervention of form and material substance are serious hindrances to it, in that they of necessity compel the first and

principal attention, so that not until the object seen or touched is apprehended and appreciated by the reason and judgment, can it affect the feeling ; whereas, in music, nothing whatever stands between the spiritual state, out of which the composition was born, and the receptive spirit of the hearer. Itself an expression of pure feeling, its immediate and irresistible appeal is to the feeling.

To quote Dr. Munger : " It is true that we may see and *feel* by seeing, but if creation were revealed to us only through the eye, we should know far more than we should feel ; so another organ is provided that shall bring creation to us as emotional beings—the *ear*, conveying sound. Hence, if using the eye, we look at creation, and find mathematical laws in gravitation and crystallization, and so infer, as we must, that there is a mind behind the laws that speaks to our minds through them, so, using the ear, and hearing sounds that touch our hearts, we must infer that there is a heart behind the laws of sound that seeks to reveal itself to us through them." *

If we believe, then, that our art is something more than the "Exercise in occult arithmetic" † for which Leibnitz held it—even a pre-eminent means by which the affections of the Divine Heart are revealed and communicated to us, and also the pre-eminent means by which we may interpret those affections to our fellows—the subject of my address assumes more importance than is ordinarily accorded to it, and we are forced to conclude that music may have an all-important mission, both to mind and heart, and sustain as important a relation to the development of mental and moral character, as it confessedly does to refinement of taste and the right development of what is known as the æsthetic faculty in us.

I am, of course, well and painfully aware of the tremendous *argumentum ad hominem* that may be brought against the position. It will be objected that the biographies of many eminent musicians, and the generally observed facts concerning the mental and moral status of the average, or even the *exceptional* musician whom we know, do not seem to establish as a practi-

* *Christian Thought*, Vol. iii., No. 4, p. 242.

† *Leibnitii epistolae*, collectio Kortholdi, op. 154.

cal fact what is here claimed as a theory. This is hardly the place in my argument for a definite answer to this objection, but it may be helpful to us to be reminded at once, (1) that by the very sensitiveness of every true musician's nature, he is peculiarly exposed to some kinds and violences of temptation; (2) that music, like every other art (but more than any other, by as much as it is more sensitive and spiritual than any other), may be made the vehicle of impure feeling, perverted imaginations and unholy affections. It may thus exert corrupting influence, and be constrained into the service of sin, degrading and sensualizing instead of elevating and spiritualizing him who submits himself to its power. (3) The counteracting influences of public life, as well as of all the numberless seductions into wrong ways to which every one is exposed, and which are often sufficient to overpower the most potent of human helps toward characterfulness—these should surely not be left out of view, if we attempt to explain the apparent failure of music to accomplish, in given cases, all that is here claimed as of right to be expected of it. (4) Many who officiate as priests in the temple of art, and are recognized by their contemporaries as accredited exponents of its spirit and power, are nevertheless ignorant of its true quality, and unaffected by its purifying ministries. Deaf themselves to the sublimest revelations of truth and beauty which are borne in upon the sensitive spirit with the harmonies that delight the senses, they cannot know the alluring persuasions toward truth and beauty of thought and feeling that accompany them, and which are so potent and precious to those who can and do receive them.

Admitting then, that all art, in proportion to its fineness, may be perverted, and so, that music, the finest and most spiritual of the arts, may be the most radically and harmfully perverted of them all, it is still distinctly true that such perversion is always manifest. Fine art does not submit to profanation without a protest that quivers through all its utterances and divests it of all its winsome grace and lofty dignity. Here, therefore, I make my first point: *Music is allied to the best, within and about us.*

The best sentiments, the noblest aspirations, the sweetest

affections, are those which are most congenial to it. Not all the thoughts that find expression in our daily conversation can be fittingly uttered in connection with music; not every verse of poetry may be made to sing. It is only when the thought is high and fine that its associated sentiment seeks the aid of musical expression. Not the comedies of Thespis, but the high tragedies of Sophocles, not the vaudevilles of Corneille and Molière, but the higher conceptions of Racine and Goethe, not the triflings of Dean Swift, but the passionate patriotism and the exquisite heart-revelations of Thomas Moore, not the panderings of the earlier English writers of tragedy, but the sturdy morality and the majestic movement of Shakspeare at his best—these are specimens of the discriminations that our art of music has always made and is constantly making. Mendelssohn could not write an opera because he could not find, and all the world of literature could not produce for him a worthy libretto. To him, music was too fine and high an art to be wedded to the vulgar or the commonplace; posings and costumings and plottings were so utterly unsuited to its genius and mission, that his pen was stayed. That familiar experience of Handel in connection with the composition of the Hallelujah Chorus, marked a crisis in his theory of the mission and ministry of music, more conspicuously than in any other department of his thought or life to which the biographers have introduced us. They say he became gentle in demeanor, unresentful of injuries, fervent in piety, kind to the unfortunate, etc.—but this is the significant fact for us concerning him: up to that year, 1741, the vulgar ribaldries and indecencies of the poorest of the Italian text-writers had sufficed to awaken his muse and to excite his highest ambition, whereas, from the moment of that revelation of the excellent glory to his soul, his only aspiration was that he might be empowered to utter forth in worthy strains of song the divine affections that had been born in him. “*Laschia ch’io pianga*” gave way to “*I know that my Redeemer liveth*,” and the sensuous strains of *Rinaldo* to the strenuous ascriptions of his mighty oratorios. It matters not in what direction you turn for testimony concerning this matter; music may be travestied and compelled into the basest of service, but it is to the utter forfeit-

ure of the best there is in it. If, however, you seek for true music, capable not only of delighting the hearer, but also of elevating and developing him in mind and heart, you will find the basis of it to rest in the mental and moral character of the composer and interpreter. Poems of heroism, or love, or suffering, or worship, require, in order that they may be appropriately wedded to song, that the sentiment of them be high and fine. Bravado will not answer for chivalry, sensualism for pure affection, vulgar sentimentalism for true refinement, hypocrisy for religion, if music is to gather up its central spirit and exhale it, like exquisite and vivifying perfume upon the heart of men. The best music of the centuries therefore—the music that has become classic—is the expression of pure and beautiful sentiment. No more inexorable law of the survival of the fittest ever operated in the physical world than that which differentiates the worthy from the unworthy, the genuine from the hypocritical, the helpful and strengthening from the enervating and depraving, in music. Men do not always know the secret of the wonderful and undiminished power exercised upon people of all classes by the masses of Palestrina, the oratorios of Bach and Handel, the symphonies of Beethoven, and the songs without words of Mendelssohn. No theory of psychology explains or throws any considerable light upon it. The only explanation lies in the fact that pure and exalted affections, awakened in the heart of the composer by the Divine Source of all true inspiration, were breathed into the works, wrought out in reverent and obedient conformity to the laws of form and interpretation that belong to the very nature of music, so that, hearing the sounds, our hearts catch the thrill of the spirit, and we are swayed into accord with it, in direct proportion to the sensitiveness and receptivity of our spiritual nature.

If music is allied to the best in us, it must be of God, and have place among the divine forces working in our behalf, which, we are assured, are more than the forces that be against us. It must have especial fitness for the expression of religious sentiments, and all history as well as our own experience fulfils the expectation. Dr. Forkel assures us that "Though there have been services of religion without preaching and even without

prayer, there is no record of one without its music."* Dr. Munger, in the address from which quotation has already been made, shows not only that music belongs to religion, but that it has no necessary relation to anything else. He says, "Men fight better under the stir of music, but they can fight well without it. Business does not require it. Pleasure craves it, but the voice and the zest of young life supply its lack. It is not needed in the enacting of laws nor in the pleadings of courts. It might be left out in every department of life save one, and nothing would be radically altered; there would be lack, but not loss of function. But religion, as an organized thing, and as worship, could not exist without it, and so the Church in all ages has flowered into song. It takes for itself the noblest instrument and refuses none. It draws to itself the great composers, whom it first attunes to its temper, and then sets to its tasks, which invariably prove to be their greatest works."†

Rejecting all association with the ordinary sentiments of our daily intercourse, and consenting only to its higher and rarer experiences and sympathies, music lays its electing hand upon these deepest and most sacred of them all, that cluster about the religious life, and brings all its marvellous wealth of intensive and expressive resources to their aid. No other service of music is ever so sympathetically or efficiently rendered as this, in connection with which

" New passions are wakened within us,
 New passions that have not a name;
 Dim truths, that we knew but as phantoms,
 Standing clear and bright in the flame.
 And the soul is possessed with yearnings,
 Which make our life broaden and swell;
 And we hear strange things that are soundless,
 And we see the invisible."‡

The second thought that I desire to present has already been suggested; but, as bearing upon my subject, it requires more specific treatment: It is that music is neither the creature nor the expression of *thought*, but of *feeling*; it is not a volun-

* *Geschichte der Musik, Vorrede*, Leipzig, 1820.

† *Christian Thought*, Vol. iii., No. 4, p. 260.

‡ F. W. Faber, D.D.; Poem on Music.

tary and predetermined thing, but one involuntary and spontaneous. It does not concern itself immediately with convictions and opinions, but with the foundation sentiments of the heart—loves, joys, sorrows, fears and faiths, out of which these are born. A man who thinks but does not feel may be a statistician—even in some sense a philosopher—but he cannot be an artist; he lacks the elements of spiritual nature that alone can breathe themselves into forms of art. Similarly, a man without sensitiveness who should present himself before a work of art to be impressed by it, would utterly fail. Whatever else he might get, the indwelling *spirit*—that which to the artist is everything and all—he could not receive, because he lacks the receptive faculty to which alone it can reveal itself. You will remember how George McDonald, in describing the effect of Joseph Jasper's music, says: "One cannot understand music unless he is humble toward it, and consents, if need be, not to understand. When one is quiescent and submissive, opening the ears of the mind and demanding of them nothing more than the hearing—when the rising waters of question retire to their bed, and individuality is still, then the dews and rains of music, finding the way clear for them, soak and sink through the sands of the mind, down, far down, below the thinking-place, down to the region of music, which is the hidden workshop of the soul, the place where lies ready the divine material for man to go making withal." It is the function of art to see and to portray the invisible, the ideal, in its true relation to the laws of the universe and of the kingdom of God; to thrill the insensate marble with a completer life than ever pulsed through mortal veins and gleamed on human face—to paint a fairer creation, more wondrous beauty of human form and feature than the eye has ever seen—to implete the massive chord-structures and the tender melodies with a deeper sentiment or a grander, one more tender or more triumphant, than the heart could otherwise express or receive. Only, both he who presents and he who receives must be firmly rooted in loyalty to truth, lest the clear vision be obscured by the mirages of disordered fancy, and the Divine Voice be lost amid the deceptive syren-songs of earth. Much has been written concerning the nature and influence of music that is

false and misleading because of mistake at this point. The inter-relation between thought and emotion is so constantly forced upon our notice in the revelations of our own consciousness, as well as in the observation of conduct and motive in those about us—each exerting a controlling and shaping influence upon the other—that we are in danger of imagining them to be inseparable, and of failing to recognize the separate ministries by which each is affected. It is, therefore, all-important to our discussion that this point be established—namely, that music appeals directly to the *emotions* of men, exerting its influence upon them with irresistible and unequalled power. As science is a system of deductions made by the mind from fixed laws that are recognized and accepted by it—a creature of the intellect, addressed to the intellect—as the external world is a material structure (however informed it may be with spirit, to the spiritual sense that lies behind the physical), appealing to man's animal nature through the five senses—as obligation, duty, right and wrong are apprehended not by these faculties but by another, separate from them, though in mysterious ways inter-linked with them—the conscience,—so the universe of feeling, which is God's personal manifestation of Himself to His children, addresses itself not to their senses nor their mind, but to their heart—these things being spiritually discerned. Only in the touch of heart upon heart, the awakening of love by the manifestation of love, the creation of holy desires and affections in the human heart by spiritual contact and fellowship with Him “who was made flesh and dwelt among us . . . the Only Begotten of the Father, full of grace and truth,” do redemption and spiritual life consist; and it is this universe of feeling, in all its graciousness, beauty and righteousness, that, urging itself, indeed, in all possible ways, into every means of communication with man, whether from the world of nature or of mind, created art as a means of more immediate approach to the human spirit, and that in the course of history has superseded one art-form by another, as the conditions of spiritual life have improved, and the possibilities of spiritual communication enlarged, until, in music, we have an art unlimited, unhindered by intervening forms and physical substance, a purely spiritual medium with a vocabulary

(if we may so express it) infinitely finer, more flexibly expressive, more extensive in range than is human speech, though it draw to itself all the graces and alluring persuasions of oratory and the drama—an irresistible power that is unmatched by any other influence within our reach, that can be brought to bear upon the heart. But an objection is often urged against this art upon the very ground upon which I have tried to base its supremacy; namely, that its field of operation is the emotional life. It is urged that whatever excites the feelings, without immediate reference to the reason, or definite purpose of issuing in action, weakens and degrades the character; that noble thinking and doing, not noble desires and affections and imaginations, constitute character; deeds of heroism, honor and charity constitute the religious life, not spiritual atmospheres of faith, hope and love. The superficiality of this view is abundantly apparent; for, just as behind all the deeds of human life lie a governing will and an impelling motive, so behind and underneath all our doing and thinking lies that foundation realm of our nature, wherein are our loves, desires, aspirations, and spiritual perceptions; the faiths and hopes that often will not relinquish their hold upon us, whatever be the perplexities that assail the reason, and overwhelm the understanding.

It is the quality of the central self—the emotional being—that gives all character of worthiness or unworthiness, strength or weakness, godlikeness or devilishness, to thought and life; and it is into this central self, underneath the reason and the will, this region of controlling affections, that the divine art enters with its quickening inspirations of truth, beauty and goodness, its furnishment of high and noble ideals to the imagination, and its most alluring persuasions to thoughts and acts of purity, nobility and refinement.

It is the boast of the present age that it is *practical*; but beside the undoubted merit of the glorying there is lodged in it much that is not meritorious, but that is, on the contrary, fraught with peril alike to character and culture. If this apotheosis of the practical teaches a philosophy of life that discards ideals, and fetters us to the seen and the already attained, in any department of life or thought, if it intimates that any consider-

able motive or impulse to high feeling, thinking and doing, or that any valuable reward for such feeling, thinking and doing, is of the earth—utilitarian—concerning itself seriously with the commonplace problems of our physical life, then it is not only most pernicious and destructive, but such a practical becomes in the highest degree unpractical, since, in order to be true to itself, the practical must aim in all ways to secure the real and not the fictitious reward; the farmer must sow his stock of corn and potatoes in the spring rather than eat it, with reference to the greater possessions of the harvest-time; the boy must sacrifice the natural instincts of his young life for liberty and enjoyment, with reference to the mental and spiritual power that are hoped for in the man. Then no one better than the extreme practicalist knows that the supreme, nay, the only adequate, motive to faithfulness in his round of common duties lies beyond the seen and the tangible—in the realm of affections and faiths, that is within and beyond. There are dreams, it is true, that are but the lawless workings of a disordered fancy, and there are superlative visions, that are the clear outlook of the pure soul into the spiritual world, along the line of universal law which God has revealed to us as operative in all His wide domain. So the true poets, painters, musicians of the world have been the prophets of history, the clear-sighted seers of their generation, the true philosophers and inspirers of literature and art, the practical teachers and the saviors of the race.

It is urged again that, since art is in itself unmoral, and so may be made the vehicle of unholy passions, and since its influence is exerted beneath the domain of the reason and the will, and so, in large measure independent of their dictations, the peril of submitting mind and heart to its influence outweighs all possible chance of help toward morality and virtue to be expected from it. How often, says the objector, has the insidious voluptuousness of ball-room music sufficed to extinguish from the mind of well-meaning men and maidens all traces of that tormenting consciousness of degradation in consenting to the sensual embraces of the dance, that made them hesitate and hold stern argument with the voice of conscience as they crossed the threshold of the room ! And how have musicians invoked

the help of their art to give currency to the most vulgar and demoralizing of sentiments, as they found expression in the disgusting libretti of the Italian operas of twenty years ago !

The force of this objection, as of the former one, must be acknowledged as bearing upon the necessity of clear and careful discrimination between the art which is founded upon right moral character, acting in accordance with its real nature, the expression of feeling that is pure and fine and high, and the art which by origin, purpose, association or spirit, presents itself as trifling or enervating, even if not impure and degrading. So far, however, from weighing against the intrinsic value of music to mind and heart, and what may fairly be expected of it under favoring conditions, and beneath the blessing of God, these possible perversions of it constitute a powerful argument in its favor, even as the depths of depravity to which the heart can sink, when it misses the mark, illustrate the more impressively the possibilities of virtue and power to which it was appointed.

It must not be forgotten that it is to helpful and healthful influences, and to these alone, that music is *pledged*, both by its nature and its history, and that it is especially leagued to religion as the truest exponent of its spirit, and the means by which, vastly better than by any other, the fineness, fervor, devotion and exaltation of it may be interpreted and impressed upon the sympathies of men. A quaint writer,* two generations ago, wrote these sentences, in a rarely clear and accurate explanation of this function of music: "Music is a language; it speaks to the feelings of the heart what words can only speak to the understanding. Her melodies and harmonies, duly combined and justly performed, comprehend and wonderfully surpass all the powers of rhetoric. Theology and music unite and move on, hand in hand, through time, and will continue eternally to illustrate, embellish, enforce, impress and fix in the attentive mind the grand and important truths of Christianity." Later in the essay, the author says, "Music, as a science, gives pleasure to the understanding and is a feast to the rational mind. As an art it gives pleasure to the ear, and through the ear it penetrates the heart and pervades all the powers of the soul. It has also a surprising effect upon the

* Andrew Law. *Essay on Music.* Philadelphia, 1814.

heart, one species of music exciting to pity, lenity, tenderness and love, while another species excites the spirit of courage, and still another, grief, sorrow and mourning, or the solemn, reverential and devout feelings of piety and love. There are other kinds of music, it is true, which produce opposite effects, exciting and cherishing the vicious passions of the corrupt heart. That sort of music should be cultivated which, in its own nature, is calculated for the purposes of guarding against the evil propensities of the heart—of leading the soul in the paths of reason and propriety, of exciting pious feelings, of promoting solemn devotion, and of increasing the ardor of the soul in the praises of God and the Lamb."

Quotation might be made from multitudes of writers in all the ages of history, and in all the languages of human thought, in sympathy with this testimony, and as attesting not only the divine credentials of our art for this holy mission, but also the wonderful success which, in all the generations of mankind, in spite of its manifold perversions, has attended its ministries. It is impossible even in thought to subtract it from the array of forces and influences that make for righteousness within and about us, without falsification of all history, and denial of the choicest and best of human experience. The sentiments of patriotism, devotion, penitence, faith, love, sorrow, joy, triumph—the finest sympathies of the heart—never knew complete utterance apart from the ministries of this art of arts, which is able to traverse the whole range of heart-experience, and interpret its every phase with a truthfulness and impressiveness that are wholly its own. It enters every department of our higher life, if we will give it room, with its voices of gladness for our hours of joy, and its tender whisperings of sympathy in time of trial, that sooth our sorrows, and

“Steal away their sharpness, ere we are aware.”

If we would fain offer fitting and worthy acts of worship to God in His house, how quickly and naturally do we turn to music to interpret the desire and to utter the voice of our adoration and praise! And how has the soul at such times, in spite of the earthliness of its affections and the intrusions of the world, been upborne by the strains as upon mighty wings beyond the

reach of disturbing care and intervening clouds of doubt, until God seemed near, and a precious sense of His welcome warmed the heart into fervors of devotion ! Church architecture strives in its superficial way to do something of this for us, and those of us who have visited the grand cathedrals during religious service, know how grand and impressive the ministry is. But no such effect can at all compare with the impressiveness of a grand outburst of organ-music, that fills the vast edifice, and, as with

" Ten thousand harps and voices "

gathers up into itself all the joy and passion of our worship; or with the grandeur of a chorale as sung by the great congregation, that pours out, as a pent-up flood, the thanksgivings of a thousand hearts. What power like that of melody to undo the heavy burdens of business-care, and to refresh the weary spirit with its alluring restfulness and calm ! So, all through the domain of spiritual life, a most wondrous correspondence is discovered between the kind provision of our Heavenly Father in music and the deepest needs and experiences of His children.

" Oh, Music ! thou surely art worship,
-But thou art not like praise or prayer,
And words make better thanksgivings
Than thy sweet melodies are;
There is in thee another worship,
An outflow of something divine,
For the voice of adoring silence,
If it could be a voice, were thine." *

I ask a moment's attention to the physical and æsthetic nature of music, as related to the mind and heart of man, in further investigation of its mission. Originally it included all arts and sciences over which the muses presided—the encyclopædia of learning. The science of sounds was particularly involved in that of the stars, and hence the Greek name *μουσική* had special reference to these two branches of study, giving occasion to Pythagoras for his theory of the music of the spheres. But in its comprehensive sense the name was used to denote the entire mental training of a Greek youth. Its root was in the universal sense of rhythm which corresponds to all the phenomena of the natural world, and constitutes the basis upon which we

*Rev. F. W. Faber, Poem on Music.

gain access to those phenomena. This sense of rhythm is so inwrought into the whole nervous organism of man, that regular successions of sounds give pleasure not only to the ear, but to the whole sensitive being, while violations of rhythmic relations give corresponding pain. But rhythm does not concern itself merely with the periodicity of sounds so far separated from each other in point of time as to present themselves to the ear as distinct; still more vital is it that every tone in itself, and every group of tones that comes to the ear as a chord be rhythmic. A musical tone differs from noise, and concord from discord, harmony from jargon, by its quality as rhythmic or unrhythmic. Every sound that reaches the ear as a simple tone is really an assemblage of tones, each one of which represents a given and absolutely uniform series of shocks or impulses communicated by the sonorous body to the air, in accurate and invariable rhythmic relation to every other. The foundation-tone, which is commonly the only one of which we are distinctly conscious, is thus the basis of what is in reality a chord, the secondary tones of which are relatively so light, and so perfectly adjusted in vibration-ratio to the main tone, as to blend with it in absolute sympathy, and produce, in the permutations of intensity which are possible to the series, all the wonderful varieties of effect that we know as tone-color. These various tones, representing respectively the notes of what is known as the common chord, so blended together, though not separately cognized by the brain, are accepted, each for itself, by the wonderful mechanism of the inner ear, according to the relative intensity of each, and builded into the tone-effect, an exact counterpart of the vibration-effects produced upon the air without. Should one constituent element of this tone-structure vary from its true rhythmic relation to the others by one vibration in ten thousand, the sensation produced by it in the brain, would be as keenly painful as, under perfect conditions, it is pleasurable. Music is therefore only possible because of this universal and exact law of harmonics that governs all sonorous bodies, and of the precise adjustment of the nerve-filaments of the ear to it. Chord-construction is nothing more than an attempt with imperfect instruments to repeat this perfect work of nature on a

larger scale, re-enforcing the individual members of the primal group, which is thus discovered to be the basis of true accord. The entire science of music is thus seen to rest upon most wonderful rhythmic laws that hold in their grasp all material things that are capable of giving sound, and that are reflected in the physical and mental nature of man with absolute accuracy.

(2) Music, as we have considered it, is simply the language of tones—a language far more varied and subtle than that of words, capable of far finer shadings of expression, and so fitted for the utterance of feeling rather than thought. It needs no form of interpretation or illustration, as the plastic arts often do ; it cannot portray dramatic situations nor describe natural-scenery ; it does not concern itself with imitation of sounds in the natural world, as the murmuring of brooks or the singing of birds. Any attempt to compel it into any service is travesty, even though instances of such attempts are to be found among the writings of great men. Association of music with poetry, while creating for us an art-form of great value and influence, is always to the detriment, and commonly to the destruction, of all its distinctive character. When a thought expressed in words is wedded to a feeling expressed in tones, unless there be perfect similarity of quality and color between them, the grosser medium invariably attracts the attention of the hearer to the disadvantage of the less obtrusive and more spiritual associate. This may be well enough in given cases—even desirable, if it heightens the effectiveness of the words, but the art of music suffers by it. Even in the rare instances of perfect conformity between the sentiment of words and music, the tone-structure is hindered and cramped, both rhythmically and melodically. The phrase of music which Handel wrote for the words, “I know that my Redeemer liveth,” is a striking case in point. We heartily unite with all Christendom in giving thanks that these most adequate sounds were given to the great composer with which to utter the sentiment of absolute trust which was born in his soul as the thought contained in the words was fused into feeling ; but the strain would have been far finer and grander (even though somewhat less definite in its communication to unmusical hearers) if he had given free play to his music, in expres-

sion of the sentiment of his heart. Still more painfully do the sounds halt and linger, as it were, in conscious constraint, in the closing chorus from the same oratorio, until, after the utterance of its final ascription, "Worthy is the Lamb that was slain and hath redeemed us to God by His blood, to receive power and riches and wisdom and strength and honor and glory and blessing," the mighty tide of harmony and melody can no longer brook restraint, and it bursts all bonds, freeing itself from all limitation of words or phrases, absorbing the voices themselves into the grand orchestra, wave overwhelming wave, height transcending height, as it sweeps on to the climax, bearing upon its heaving bosom all the adoration of our hearts, until its energies are spent, and the whole mass is thrown upon that solitary chord of the inverted seventh, in startled confession of the incompleteness even of the highest forms of expression by which men seek to utter forth all the height and the depth of the mighty theme. This fact of the real greatness of music only when it is unfettered and at liberty to exert its influence in its own way and by the use of its own resources, was blindly apprehended by the very earliest composers, and has been distinctly enunciated by prominent musicians at intervals during the past two centuries; it is at last established and recognized by all music-workers, so that, in the composition of vocal music, whether for one or many voices, a broad symphonic structure must be woven together as a basis for the vocal score, capable of gathering up and expressing by itself all its spirit and fervor, and in which the voice-parts appear as the central and controlling element, themselves constituting a true thematic structure, rather than a mere series of notes adjusted to the rhythmic demands of a series of words. The days of commonplace ditties, with meaningless accompaniment; of purposeless anthems, which consist of frivolous melodies and weak harmonies, affixed in some fashion to senseless iterations of sacred words; of cantatas and operas which are mere occasions for displaying feats of vocal gymnastics—these days are practically gone, and in their place has come an era of truer thought concerning music-work, which recognizes the function of music as *music*, and makes use of all available instrumentalities for the accomplishment of its magnificent mission.

If I have succeeded in making clear my belief that music, so construed and differentiated, was designed by the Creator to be a channel of blessed communication between Himself and His creatures, not, indeed, to teach them the doctrine concerning Himself and their relation to Him, but rather (as Dr. Munger so fittingly phrases it), to constitute "an art-path" by which our spirit may have immediate and direct access to His Spirit—one of many ways, but the directest and most universal of all—it only remains for me briefly to note two or three of the most important inferences to be drawn from our discussion.

First, assenting to the doctrine here enunciated, of the inter-relation and inter-dependence of the emotional and the intellectual and moral nature, music, exercising powerful influence for the good and the pure in the realm of the affections, must be capable of communicating such influences in most controlling and determining ways to both mind and heart, prompting to noble thoughts and purposes, strengthening suggestions of the good and the true that are made to the understanding, increasing the power of clear mental discrimination between the true and the false, the fine and the coarse, the noble and the mean, the gentle and the vulgar, and inclining the will to the acceptance and performance of "whatsoever things are true, honest, just, pure, lovely and of good report." Napoleon Bonaparte, who was a keen observer and not at all a romanticist, said, in an address in Milan in 1797, "A musical composition, if the work of a master, never fails to touch the feelings, and, through them, to exert more powerful influence on the mind than a good book, which convinces our reason, but does not influence our habits." Dr. Samuel Johnson, an authority whose strength of intellect and purity of moral character none will question, wrote, "The science of musical sounds, though it may have been depreciated, as appealing only to the ear, may with justice be considered as *the art* that unites corporal with intellectual pleasures." The quotations from Aristotle, Plato, Augustine and Martin Luther, that are so familiar to every one, are but specimens of testimonies that have been borne in every land and age. The main difficulty in accepting them is the discrepancy that often exists between the observed characteristics of many musicians, and the sort of char-

acter which this theory would lead us to expect of them. But, on the other hand, how are we to explain the mental and moral strength of Handel or of Bach or of Beethoven, who must be ranked with the giants—the Homers and Dantes and Miltons of literature—and yet who confessed that they owed all their education, beyond the most rudimental schooling, to music? What are we to do with the constant testimony of Mendelssohn and Schumann and Wagner—men of very different nature, surroundings and history—but all of whom were possessors of mental strength and moral vigor, men of clear insight and philosophical habit, and who, viewing the subject from very different stand-points, unite in ascribing to music a power to cultivate, refine and strengthen the mind, and to develop the whole nature into sympathy with goodness and truth, that is unsurpassed. Is it not true that great abilities or great opportunities expose the possessor to special temptations? How else can we account for those terrible lapses into grossest sin, on the part of strong and pure-minded men, that not unfrequently occur? The paradoxes of sin are indeed inexplicable, but they are realized in every walk and department of life. Then there is the singular and unexplained fact that creators, both in art and literature, frequently seem comparatively unaffected in thought and conversation by the spirit of their main life-work. (I think this is less true of musicians, however, than of other artists.) Humorists are as a rule serious-minded persons—often morose. Philosophers are not always the thoughtful or even the scholarly people that we should expect. Artists of exquisite taste are not always neat. A genius and a noble purpose for the teaching of morals and religion is sometimes accompanied by a stress and power of temptation to the deepest immoralities, that require constant watching and prayer to overcome. “I do not believe,” says Landor, “that the best writers of love-poetry ever loved.” Painters have left the haunts of vile debauch to sketch celestial scenes, and orators, after proclaiming to men the powerful inspirations to patriotism and virtue, have been carried home in beastly intoxication. But in spite of all, the true beauty which even vicious artists have presented to men is of God, since all beauty is from Him and of Him, and such artists themselves

have in multitudes of cases felt and acknowledged its divineness, and have striven, perhaps in some instances inconstantly and vainly, to adjust their life to its spirit.

True artists utterly given over to vice are very exceptional in any country or in any age of history. They are and always have been men of sensitive nature and noble impulses, essentially religious at heart, if for no other reason, because of the constant and sympathetic reception into their hearts of the deepest and highest religious feeling, in order that it might find expression in their work. They also have always been men of rare discriminating power—quick to detect a subterfuge, and to go direct to the heart of things. Ignorance of the world, and ill-adjustment to its maxims of etiquette, imperfectness and even sinfulness in their thought and conduct can be accounted for without denying the divinity of their gift; while we find the pages of history, ecclesiastical and civil, glowing with the record of their helpful services in every cause of truth and righteousness, from the very earliest times until now. It is the perversion or the idolatry of art that has made some of the periods of its greatest ascendancy periods of corruption and servitude. Whenever individuals or communities have substituted artistic excellence for character, or taste for conscience, they have taken themselves out of the divine order, and involved both art and character in hopeless ruin. In Athens, in that age, the most devoted to art that the world has ever seen, when Aeschylus, Sophocles and Euripides had just produced their matchless tragedies, inculcating the stalwartest lessons of honor and virtue—the age of Pericles, “the perfect orator,” when Parrhasius and Zeuxis, the painters, were in their prime, and Phidias was adorning the temples with the surpassing productions of his chisel—the people forgot the warnings of their teachers and became effeminate in their idolatry of the art, making *it*, rather than the divine *truth* which it sought to glorify, the object of their devotion, and God gave them a man who, while himself a lover and a sculptor of beauty, was, as we are told, “personally almost grotesque in form and face, with unequal shoulders, upturned nose, big lips and protruding eyes, but who was possessed of a sturdiness of virtue, underlying his art, that made him the most conspicuous man of his

age."* Had Athens heeded the teaching of Socrates, that the immortal beauty lies not in grace, nor in any external creation of art, but in that strength of character and positiveness of virtue which should manifest themselves in them all, and which will endure when the sculptured forms of the Parthenon are shattered in pieces—it might have been saved, and empowered to glorious ministries in behalf of the Christian religion, so soon to dawn upon the world. Three times has our art of music been exalted by its votaries into the first place in the services of religious worship, receiving itself the homage of men instead of inspiring them to the worship of God and obedience to the truth; and each time has it in all righteousness been swept from the House of God as a usurper. The fault in these cases was not in the art, but in the perverted administration of it. Think now of that grand man in Leipzig a century and a half ago, Sebastian Bach, whose oratorios and cantatas are as masterly specimens of exegesis as of musical form, and whose reverent piety and sweet Christian spirit were breathed imperishably into those stately compositions for the organ, which, though hidden for a full hundred years, are now the inspiration of musicians in all the earth, the majesty and beauty of their sentiment exhaling now upon us all as the treasured perfumes of the Orient. Handel said that during the twenty-one days in which he composed the *Messiah* he seemed to see the heavens opened and the angels of God ascending and descending. He broke out in audible sobs while writing to the words "He was despised and rejected of men," and the original score of the great oratorio is all stained and blurred by the tears that fell upon the pages as he wrote. Haydn tells us, "When I was engaged in composing the 'Creation,' I felt myself so penetrated with religious feeling that, before I sat down to write, I earnestly prayed to God that He would enable me to praise Him worthily." Beethoven was a devout and reverent man, of sublime faith, unselfish devotion and heroic conscientiousness; Mendelssohn was equally eminent as Christian, scholar and musician, great above all his co-laborers, not because of genius or ability superior to that of any of them, but because of his clear

* Rev. W. C. Wood. *Essay: Art and Character.* 1878.

recognition of the universal law that connects true art with character—mental and spiritual—and allies it with the forces that are, under God, working the enlargement, upbuilding and sanctification of humanity. Similar mention might be made of many other composers and performers of music, ancient and modern (and the list would include *all* the really great or permanently influential of them), whose magnificent ministries have gone into thousands of hearts, enkindling in them something of the love and faith and hope out of which they were born.

“ So works this music upon earth;
God willed it so, and sent it forth,
To add another worth to worth.
A new creation-bloom that rounds
The old creation, and expounds
His Beautiful in tuneful sounds—”

“ Nor thence partakes
Fresh pleasure only ; for the attentive mind
By the harmonious action on her powers
Becomes herself harmonious ; wont so oft
In outward things to meditate the charm
Of sacred order, soon she seeks at home
To find a kindred order, to exert
Within herself this elegance of love,
This fair inspired delight ; her tempered powers
Refine at length, and every passion wears
A chaster, milder, more attractive mien.
. Thus do the men
Whom nature's works can charm, with God Himself
Hold converse, grow familiar day by day
With His conceptions, act upon His plan
And form to His the relish of their souls.” *

*Akenside. *Pleasures of Imagination.*

THE LABOR PROBLEM AND THE CHURCHES.

[Read before the American Institute of Christian Philosophy, August 21st, 1886.]

BY WM. GODWIN MOODY, BROOKLYN, N. Y.

THERE are times and occasions in the life of every nation and people when all their moral forces must be aroused and set in action to preserve and protect their institutions and prolong their existence. Such an occasion was met by our nation and people at the time and during the events that led up to and the prosecution of the war of the rebellion. The matter that was then at issue—that caused our terrific struggle of four years and the flow of rivers of blood—was the settlement of a single phase of the Labor Problem.

And now, in these closing years of the first century in which machinery and improved processes have become the main factors in general production, and trade the universal vehicle of distribution, we are again confronted with the Labor Problem—not by a single phase only, but in its most concrete form, viz.: where and how can the great masses of mankind find the occupations that will guarantee to all the necessities and comforts of life? To-day this question has taken on a form that may well blanche the cheek of the most fearless, for it is filled with threatenings of the greatest peril and demands instant solution.

Is it not a great mistake to treat this problem as an issue between labor and capital—capital as employed in production and distribution being understood in this relation? Surely capital is the natural fruit of labor, at least in its normal condition, and nowhere in nature can we find antagonisms existing between any plant and the fruit it bears.

But it is obvious to everyone that there are the most deadly antagonisms existing and conflicts raging in the ranks of labor, especially between those who are employed and the unemployed. Labor instead of seeking to derive an increase of comfort an!

reduction of toil that would affect its whole body, as the just compensation and adjustment for every advance in productive power, has made war upon itself and thrown a constantly increasing portion of its force out of employment and into fierce competition with those who may be found employed.

The immediate effect of this conflict in the ranks of labor is the creation of a body of idle workmen, both skilled and unskilled, who, to obtain the means of life, are compelled to enter into competition with their fellows, in a field where cheapness has become the deciding factor, and sell their labor upon the best terms they can obtain, however long may be the hours or small the wages. Under these conditions capital is also forced into the competition, unemployed labor at all times offering itself as the ready weapon to fight capital's battles and intensify labor's conflicts. In this way labor is continually forcing itself to greater privations in every direction.

The first development of these antagonisms and conflicts in the ranks of labor, in our country, was some forty to fifty years ago, when the first effort was made to limit the number of boys who should be permitted to learn trades. Under the operation of this limitation great numbers became unfit to fill any position requiring skill, and were forced either into idleness or to the most degraded and uncertain employments. In the years immediately preceding our great civil war the country was filled with idle and partially employed men and women.

But soon after the close of the war the proscription against unrestricted apprenticeships was greatly intensified and rigorously enforced, and bodies of workingmen were organized who also denied the right of any to work who were not members of special labor organizations, and subject to such rules and conditions as the organizations might see fit to enforce, under the most fearful pains and penalties, written and unwritten.

In evidence of this it is only necessary to point to the horrible atrocities practised upon "scabs" and "rats" by these labor organizations (that represent but a small fraction of the great body of labor) from the time of the Molly McGuire assassinations and arsons, in the coal regions of Pennsylvania, more than ten years ago, to the vastly extended and common resort to personal vio-

lence and intimidation of every nature, in all parts of our country, at the present moment.

[The spectacle presented by twenty-five thousand men who, since the first reading of this paper, simultaneously abandoned their exceptionally well-paid work in Chicago, and made war upon the thousands of unemployed and needy men anxious to do the work that they had left, is as significant as it is amazing. And the accompanying picture shown in this land of liberty and equal rights by the hundreds of regular and special police armed with Winchester rifles, and two regiments of State troops, summoned to protect those who would work from the intimidation and murderous assaults of those who would not labor, may well cause us to revise some of our methods of discussion.

So, also, the strike of some twenty thousand employés engaged in the production of knit goods, in the State of New York, and their proscriptive demands against the "scab" force employed, and for their punishment, is in the same line of outrage against the natural and civil rights of mankind.]

Here is an unwritten chapter of horrors, perpetrated by workingmen upon their fellows, that cannot be paralleled outside of the warfare of savages.

The occasional increase of wages and shortening of hours of labor, that are forced by strikes, are rarely or never permanent, being quickly followed by reaction, or complications, that make the case of labor worse than ever, and are sure to increase the uncertainties of employment and the amount of idleness.

Practically the only conflict existing between labor and capital, employed in productive industries, is the war made upon capital by organized labor to compel it to refuse employment to all labor that is not affiliated with special labor organizations. It is out of these general conditions that have grown all the industrial and social evils now so prevalent ; and the evidence appears to be conclusive that the real source of the evils and dangers by which we are surrounded is to be found in the fearful amount of idleness—by no means necessary—that has been developed by our present industrial methods.

Had the efforts of labor organizations, from the first, been directed to the very desirable objects of improving the condition

and reducing the toil of all who labor, through the increased and increasing productive power of machinery, in place of making war upon their fellows and driving them out of employment, the present wretched conditions would never have been reached. And even now, if they would adopt the policy of equal rights and the general welfare, they would challenge the hearty approval and support of universal humanity, and quickly reach the objects desired. But the continued pursuit of their present aims, by the means they have thus far used, will be, as heretofore, the greatest possible obstacle to improvement, and humanity will be fortunate if it escapes fearful disaster.

It is my purpose to use the few minutes I am permitted to occupy in this discussion, in calling your attention to a very small number of the abundant facts by which we are surrounded in proof of the correctness of these views.

In the first years of the present century machinery in general production was unknown. At that time substantially the whole amount of our domestic manufactures was the product of the industries of the families of the nation. Our agriculture was confined to the cultivation of the soil of the homestead, which rarely exceeded two hundred acres in extent, with generally less than one hundred acres under the plow. The primary object then was to produce upon the farm all that was required for the sustenance and comfort of the family, the surplus only being destined for market, to obtain those things that the farm could not be made to produce.

Upon the homestead the wool and the flax were grown, spun, and woven; then made into garments and worn by the family. When not holding the plow or using the sickle, the farmer was often his own and his neighbors' shoemaker and carpenter, besides making his own tools, and doing various other things that the farmer of to-day does not think of attempting.

In the dwellings of the towns, also, the loom was set up and the spinning wheel was heard. All our industries were eminently family employments, and the muscle of the family, with the domestic ox and horse, were the only forces then used.

Under these conditions every one, old and young, male and female, found ample employment, and plenty and contentment

in our land was the common lot. Idleness was hardly known, and the tramping beggar was never seen. As a rule every family had its separate roof; and the poor, requiring eleemosynary aid and support, were confined to the sick and feeble, the aged, and to orphaned childhood.

Now all these things are changed. The homesteads of our fathers are fast becoming traditions only, being replaced by the mammoth farms of to-day of hundreds of thousands and millions of acres in extent, where everything is produced for the market, and nothing for special family use; where women and children and family relations form no part of the fixed social economies; where machinery, steam, and other forces of nature are the main factors in production, in place of the muscle and ox of our fathers. The family spinning wheel and loom are no longer to be found; they are simple remembrances, and our manufactures of every kind are the products of huge mills, factories, and work-shops, with vast machinery continually becoming more and more self-operative, and requiring less and less of oversight and use of muscle.

Yet we still have millions of small farms—not homesteads, but an evil vestige from the middle ages—being a revival upon our soil, within the past twenty-five years, of the feudal servitude of tenant farming, without the domestic manufactures that centuries ago served to make that condition at that time endurable.

To-day the machine harvester takes the place of a hundred and fifty of our fathers' sickles; one man with machine spinners does the work of six thousand of our mothers' spinning wheels; one girl with power looms weaves as much as could one hundred girls with old hand looms; one machine printing press does more work than could be done on ten thousand old hand presses. So with carding machines, and machinery for all the work done and requiring force, excepting only, to the best of my knowledge and belief, the labor of type setting, which practically remains the same as it was when Guttenberg and Faust left it, four hundred years ago. Yet it seems probable that machinery will soon monopolize that work also.

The Hon. Carroll D. Wright, Commissioner of Labor for the United States Labor Bureau, says that "By careful computation

in some branches of work a rough estimate of the whole would indicate that each factory system employé, in 1882, represents on an average at least fifty employés under the individual system."

This means a fifty-fold increase of power in every working-man and woman for providing himself or herself, and the world, with the necessities and comforts of life. Of building fifty houses in place of one; of fifty rooms, of fifty coats, of fifty dresses, of fifty meals where formerly but one could be produced, or their equivalents in other forms. But our power of consumption has not been increased. We are still limited in our ability to use. We cannot be in fifty places at one time, or occupy fifty houses, or fifty rooms, or consume fifty meals, or wear fifty times the number of coats and dresses that our fathers and mothers could.

Our requirements and our ability to use and consume of all the necessities and comforts of life are practically no greater than were the requirements and ability of our fathers. Yet we are taxing to the utmost our marvellously increased productive power, without the least attempt to adjust these violently conflicting developments. What are the consequences? Are they not perfectly logical and just what we should expect?

The first is, that a portion only of the working force of the country now does the work that formerly required the labor of all, and that many are forced into idleness, want, and a destructive, aye, deadly competition with their fellow workingmen for the work that is now done.

And, secondly, that this idleness and competition tend directly to the constant lessening of wages, the reduction of consumption, the decrease of trade, transportation, and all the sources of employment, and the consequent demoralization and destruction of all the interests of society.

The development and operation of these forces moved steadily on in the displacement of muscle and substitution of machinery, at first slowly, but with accelerating speed, until the decade of 1850-60, when the idleness and distress in the country were indicated by the thousands of annual business failures, culminating in the panic of 1857, with 4,932 failures, and

followed by 14,582 in the three years of 1859-61. In his message of the 8th of December, 1857, President Buchanan called the attention of Congress to the "deplorable condition" of the labor and business of the country in the following terms:

"We have possessed all the elements of material wealth in rich abundance, and yet, notwithstanding all these advantages, our country, in its monetary interests, is at the present moment in a deplorable condition. In the midst of unsurpassed plenty in all the productions and in all the elements of national wealth, we find our manufactures suspended, our public works retarded, our private enterprizes of different kinds abandoned, and thousands of useful laborers thrown out of employment and reduced to want."

It was in this decade that California was pouring out her gold at the rate of a hundred million dollars per annum, and furnishing employment to at least five hundred thousand men who could not otherwise have found remunerative occupation. Yet the tendency was steadily toward greater idleness and increasing distress.

Here we have the strongest evidence that gold, though obtained during the ten years under discussion in greater abundance than the world ever before witnessed, could not prevent the destitution and distress that increased as the employments of the people diminished.

But within one hundred days after the firing of the first gun at Sumter everything had changed. Three hundred and seventy-five thousand men had found employment in the service of government—in the army and navy—and an equal number in producing the material of war and sustenance for the men under arms, or as teamsters, or in other service on the road or in the field. Idle men were becoming scarce. As the war progressed the armies were enlarged and the demands upon industry were increased, until at least three millions of men and women, in the North alone, were brought into the service of Government, with the effect of great advance in wages, higher prices for all commodities, and increased rates for transportation. The wages, even of common field hands, rose to three dollars a day, and the general average was above that figure.

This condition of things continued until the close of the contest, when it suddenly ceased, for the reason that the Government no longer had use for armies and navies, or the sustenance required for their support, or for munitions of war, and three millions of men and women that had been more than three years employed in these operations were suddenly thrown into idleness, their wages stopped, and the business that their wages had sustained was left without support.

Estimated at an average of two dollars a day the wages or incomes of those who were at that time thrown out of employment, and withdrawn from trade, transportation, and consumption, amounted to six million dollars per diem, or one billion eight hundred million dollars per annum.

The workingmen then thrown out of employment have so continued until this time, except as they have forced a division among their fellows and by taking it from others. The universal employment of that period began with the war and ended with its close. The general prosperity began with the universal employment and ended with the return of idleness, which has more than doubled within the past twenty years. So that now, taking into account the loss of time by those who are but partially employed, with the number having practically no work, the idleness in our country cannot amount to less than one half of our entire working force.

The marvellous industrial and business prosperity of the four years of the war is shown by the reduction in the number of business failures from 14,582, in the three years of 1859-61, to 1,545 in the three years of 1863-65. The universally employed working classes were then pouring their wages into the laps of trade and transportation, the effects of which were immediately felt throughout the entire range of our social system, giving practical evidence that the wages of employment were the real cause of the phenomenal prosperity of that period.

Adam Smith well said that "It was not by gold or by silver but by labor that all the wealth of the world was originally purchased."

From the last year of the war, 1865, in which there were only 530 failures, there was a renewal of idleness and business dis-

tress that steadily increased until 1873, when the failures reached 5,183, with another panic. Yet the increase of idleness and distress did not then lessen, but still more rapidly developed until, in 1878, the number of failures had risen to 10,478 for that year.

At this time there was developed a great increase in railroad building, which reached its highest point in the construction of 11,500 miles of road in the single year of 1882, calling into employment great numbers of workmen, whose wages at once went into all the avenues of trade and business, and gave a prosperity that was more or less felt by all. Business failures suddenly fell off to 4,735 in 1880, giving almost universal hope of a general return of good times. But 1882 witnessed a culmination of that industry, and within the next three years "not less than" 565,000 men, mostly common laborers, engaged in road-bed making and track laying, were discharged from that work and thrown "back upon the cities here and there"—for railroad building had fallen off to 3,000 miles for the year 1885.

To this great body of common laborers thus thrown into idleness, must be added an equal number of skilled workmen, consisting of miners of coal and iron ores, smelters, millmen, and all others required to make, in one year, the not less than 900,000 tons of iron and steel rails that were used in the construction of 8,500 miles of railroad track; with the cutters of the ties, timber, and lumber that went into the tracks, bridges, workshops, stations, and depots, and the other material consumed in these structures; also the workmen necessary for completely equipping the road just built with rolling stock and machinery; besides the men employed in the transportation of this vast amount of material, and in the supply of sustenance, etc., making a total of not less than one million men who have been thrown into idleness and want within the past three years by the reduction in employment in only one industry.

Estimating their wages at one dollar a day each, the amount thus withdrawn from trade, transportation, and consumption amounted to one million dollars per diem, or three hundred million dollars per annum, caused by the falling off in railroad construction alone.

When it is remembered that one million men, as heads of

families, are the natural providers of sustenance and comfort for not less than four million women and children, with many who are aged, sick, and infirm ; or, including themselves, a total of five million mouths and backs to feed and clothe—a number equal to the entire population of the State of New York—and that all other industries are similarly affected, some idea may be formed of the magnitude of the distress produced by the great mass of idleness now existing.

The general distress of the past three years is strongly shown by the business failures of that period, numbering 33,035 ; which, when contrasted with the 1,545 failures of three years of the war and of universal employment, distinctly mark the contrast between the blessings of employment and the miseries of idleness. It is still further shown by the sudden reduction in the number of failures from 10,478 in 1878 to 4,735 in 1880, closely following the increase of employment in only one great industry, and as rapidly rising again to still higher figures as that employment fell off.

The economic incidents that mark this period of railroad building are in exact agreement with those of the war, and the industrial lesson taught by the incidents of the war and of railroad building is a plain one and should be made useful. It is the lesson of common sense, fortified by the inevitable results of obeying economic law. It teaches that the adoption of any means, whether of war or of peace, that will end the destructive competition now existing in all our industries, trade, and transportation, and bring all into constant employment, will again be followed by the sure results of increased wages, higher prices, advanced rates, and general prosperity. By no other means can these results be achieved.

There can be no doubt that wages, instead of remaining as now, below one dollar a day on an average, would again reach an average of at least three dollars *per diem*, every dollar of which would go into trade and transportation in the purchase of the necessaries and comforts of life, and thence to the capitalist, freighted with all the toll or profits taken in the production and distribution of every product consumed.

It is through these operations that the baker, the banker, the

butcher, the doctor, the lawyer, the minister, the teacher, the trader, the transporter, the speculator, and the capitalist receive their shares of the wealth that is created. Every dollar that is paid to workingmen goes the round of the thousand and one employments of life, fertilizing them all, taking toll at every change, and at last returns to its point of departure, swollen in amount and strengthened for new circuits and larger work; and no doubt the same would be true to a limit far above anything that the workingman has ever yet received.

In this way is all wealth created and increased, and in no other can it be done. By these processes there would be created a volume of trade, from the wages of labor, that would amount to at least twelve thousand million dollars annually, or more than eight billions greater than it is at present; for the reason that now little or no toll is gathered from the consumption of the practically idle; and the consumption of those who are employed is reduced to the lowest point because of low wages and inconstant employment. It is the toll derived from the consumption of the masses of the people that fixes the amount of trade and growth of capital, whether great or small. These are economic principles of the utmost significance that should never be lost sight of.

Hence the true interests of trade and transportation require that the consumption of the great masses of the people should be developed to the highest point in every direction; for the reason that in this way only can the greatest volume of trade be created and the most abundant tolls be gathered. In this way, also, will all the requirements of labor be met, because all its necessities and comforts will be supplied to its fullest capacity of use. And thus all the elements of society would reach their highest degree of prosperity, and the present causes of misery would disappear.

These ends can be reached only by such a reduction in the hours of labor as will necessarily bring all into employment, to meet the requirements of society. What that time may be is not of the least consequence.

The essential matter is not the time employed, but the quantity of product produced and consumed. The requirements

are the necessities and comforts of life for all. It matters not whether the time occupied in its production, by the employment of all, be two hours or twenty *per diem*. But it is a matter of the highest consequence that all are employed—that none are idle—for the reason that every idle workman is a unit of loss to consumption, trade, and transportation, and a unit of destructive competition in the ranks of labor. The evidence of this is found in the fact that now every man's hand is raised against his competitor in never ending struggles, with the result of conflicts, anarchy, and chaos on all sides. But under the conditions here required these conflicts would cease, law would take the place of anarchy, and order come out of chaos.

In the matter of the hours of daily labor the scientific mind will find in their reduction, and the increase of abundance and comfort through the employment of all, the just reward and full compensation for the invention and use of machinery in universal production ; and the Christian will recognize an overruling Providence directing these affairs to the elevation and improvement of the condition of the whole human family.

But it is in the cities and manufacturing towns that the problem to be solved is presented in its most concrete forms. There, where seventy years ago only five per cent. of our people were found living, we have now fully thirty-five per cent. of our inhabitants, or more than one-third of our total population. Under our present economic system the idle, the partially employed, and the poor from the ravished homesteads and petty work-shops, that can no longer compete with their gigantic neighbors, are driven into the rapidly growing towns and cities, where they are joined by much the larger portion of our great foreign immigration. These vast accretions of humanity are literally packed like cattle into the tenement houses that are fast becoming the only homes of the great masses of our people. The Hon. Abram S. Hewitt, an employer of thousands of men, in his address before the New York Charity Organization Society, April 14th, 1885, said :

“ But now in this vast organization of industry, which,” he says, “ is more conspicuous here, more marvellous here than in any other country in the world, those who are pushed out of the

ranks of work go into an undistinguished mass of poverty and pauperism. No man knows or cares for them. . . . I only know them [his employés] as a great mass of men, who once a week must be paid off, and when there happens to be no work, or when by an improved process certain members no longer of use have to be swept out of the ranks of the workers, they go, I, and you, and no one knows where."

A common construction of the better class of tenement houses at this time is in blocks of five or six stories in height, twenty-five feet frontage for each house, and arranged for four families upon each of the floors except the ground floor, which is fitted for two families in the rear, the front being designed for shops or stores. In this way eighteen or twenty-two families are stowed under one roof, and provision is made for housing the people at the rate of over 2,000 on an acre, or more than 1,250,000 per square mile. But the actual number of persons packed into those houses generally far exceeds the number that is supposed to be provided for, and in not a few instances they are more than doubled.

Of the conditions encountered in these homes of the people, a well known sanitary engineer, Chas. F. Wingate, Esq., in reporting an examination that he had made, says :

"By actual count, from nine to twenty persons were found during the day time in each of these rooms, which averaged not over ten feet square. A three story building with six rooms contains sixty persons." Of another he says: "I asked him how many persons had occupied the room on the previous night. He answered thirty-five, and about the same number the night before."

In commenting on what he had seen, Mr. Wingate writes : "The thought that in scores of other buildings there were duplicates of these scenes seemed impossible to realize, and made one shudder. Only the pencil of Rembrandt, or the crayon of Doré could do justice to the deep shadows of such surroundings."

The Sanitary Aid Society of the Tenth Ward reports: "A family of father, mother, and four children taking in fourteen boarders and living in three rooms. In another place there were fifteen people of all ages and sexes in two little rooms, a great

portion of which is in addition taken up with old rags and refuse. One of the directors found parents, three children, and fifteen geese living in a filthy cellar. Another visited a room where were found a woman and five small children who were actually starving, having eaten nothing for two days. There a woman, but two days after her confinement, was being ejected by an inhuman landlord. Many are rooms which are let out in the day time by the miserable occupants to a dozen male and female tailors who work, hollow chested and consumptive, fourteen to sixteen hours a day on their garments or sewing machines, filling the room with a stifling atmosphere, and influencing the young children with their ribald jokes."

The report of the Tenement House Commission to the State Senate, says that it is estimated that there are twenty-six thousand tenement houses in New York City, occupied by one million persons, or three-fourths of the entire population. The per thousand of deaths in tenements has increased from 51.11 in 1870, to 56.50 in 1884. The per thousand would be greater were it not that the sick occupants of tenements go to charity hospitals, to which their deaths are credited. In the district known as the "Bend" the mortality of children under five years is over 65 per thousand.

In a careful examination made in 1883 of the actual and comparative mortality of the tenement and other districts in that city, during the year 1882, and published in the *North American Review* for May, 1884, the closest approximation that could be made of the death rate in the districts occupied by the abodes of plenty and comfort, situated to the north of Fourteenth street below the Harlem River, and between the Third and Fourth Avenues on the east, and the Sixth Avenue and the Boulevards on the west, where tenement houses and want are unknown, carried the death rate to less than 12 per thousand, but gave a mortality from destitution in the whole city of not less than 23,000 per annum. I have yet to learn of a reason why these figures should be changed. The 23,000 thus annually sacrificed to Moloch are as clearly the victims of the industrial conditions herein described as are the slain found upon the field of battle victims of a conflict of arms.

During that year the number of births in that city was 27,321, and the number of deaths 40,584, including 2,658 still-births. With a mortality fifty per cent. greater than its births, how long would it require to depopulate that city if the recruiting of its population from the outside should be stopped?

These reports of actual conditions found in the present homes of the people, picture the course of present industrial and social tendencies in colors that defy imagination to heighten. And it must be borne in mind that the whole tenement house system, with all its evils, have been the growth of the last forty years—during the very period of the greatest activity in the development of our present productive system.

New York is by no means exceptional in these matters. What is true in that city obtains, in a rapidly increasing degree, in all our cities and manufacturing towns; notably in the cities of Brooklyn, Boston, Chicago, Cincinnati, Cleveland, Fall River, Lowell, Pittsburg, St. Louis, etc.

These homes of the people are also the nurseries of all the diseases to which flesh is heir. They are the hotbeds in which are propagated and forced, not only the diseases that our people have ever contended against, but also the horrible diseases peculiar to and so prevalent among the most wretched of the poor of Italy, Egypt, and Russia. They are literally human slaughter pens, that feed our cities of the dead with the youth and strength of the land more remorselessly, more rapidly than ever did battle and all the machinery of war.

The masses of our people do not willingly subject themselves to these conditions, and the common talk that they flock to the cities as a matter of choice far exceeds the bounds of simple folly; it betrays an ignorance of controlling conditions that is little short of being criminal. For the poor there is no choice in these matters. The rich may and do select their localities and surroundings; but the poor must go or stay as they are compelled by their environments.

In addition it is only necessary to point to the fact that more than seven and one half million dollars are annually expended by organized and household charities in the City of New

York alone, supplemented by untold amounts given in personal alms, for the relief of the destitution caused by idleness and unremunerative employment.

The Charity Organization Society reports 330 local charitable institutions, existing for the sole purpose of dispensing charity in that city, and 490 churches and religious bodies for worship, whose chief labor, for a large portion of every year, is the relief of the misery by which they are surrounded.

These churches and institutions represent practically a limitless power for the solution of present social problems, if applied in harmony with economic law; but which is now exhausted in the perpetuation of a false system, and the multiplication of its miseries. For, notwithstanding the vast sums thus expended, and the great labor performed, the evils and miseries there existing are rapidly increasing and becoming more and more intense. The most that can be done, under present methods, is to afford very temporary and partial relief, with no hope or expectation of changing the tendencies or lessening the forces that produce the seething mass of poverty and wretchedness there existing, and make the fight in which they are engaged a losing battle. Yet the battle must be continued until a better industrial system is adopted, though the present effort is not to prevent and render impossible the crimes and miseries of the present system, but to smother the cry of want with a few crumbs from the tables of affluence.

How can it be otherwise? The whole thing is in direct violation of the law of God, as hereinafter shown, and in conflict with all the canons of economic science. The sick and disabled, the widows and the fatherless are the only objects of divine charity: all others must be self-sustaining. So it is in human economies, and no nation or people can endure under the conditions herein described.

Here is presented a condition of things that could not possibly exist under the old system of production and distribution, but which is now developing with accelerating power and rapidity. Do not these conditions suggest imminent peril? How great is that peril let the almost universal discontent and unrest, the never ending strikes, the murders and violences of every

nature, and misery of every degree that attend the universal struggle for work make answer.

What further evidence do we require to show that the labor problem is not a question of land tenure or ownership, or of money, or of anything other than work ; and that its solution is not to be found in agrarian measures or financial methods any more than is a desperate case of variola to be cured by the treatment of one of its pustules; and least of all by strikes or boycotts, but in the assured and remunerative employment of all?

Now what are the relations of the Church and its ministry to this problem ? In the light of the presentation thus far made it appears to be clearly an economic matter. Is it for that reason out of the realm of Christian or clerical discussion ? Let us see. If we take up the Word of God we find therein a code of economics that appears to be in perfect harmony with the lessons taught by our industrial development.

At the very first step we are met with the command, "In the sweat of thy face shalt thou eat bread till thou return unto the ground." It is the economic decree that was declared by God when, for disobedience, He thrust Adam from the garden of Eden. From that time forth it has been the immutable condition of life, and all that life represents, that it must be sustained by work that shall end only with the life it supports, and be measured solely by the requirements of existence and comfort.

So, also, when Moses, mid the lightnings and smoke of Sinai, received from God the tables of the law, he found thereon, written with the finger of the Almighty, the command, "Six days shalt thou labor, and do all thy work; but the seventh day is the Sabbath of the Lord thy God; in it thou shalt not do any work." Here the command to work is repeated with the unmistakable declaration that the work shall be as constant as is the demand for food and raiment—that it shall be daily—six days out of every seven. In the divine code this law takes precedence of all others in relation to our material life; and in the economy of life its observance or non-observance fixes the tendency to healthy or unhealthy development.

This idea is again expressed in the terms of our Lord's Prayer, "give us this day our daily bread," wherein the neces-

sity of the labor of constant provision is clearly conveyed. Certainly no one can believe that Christ was teaching His disciples to ask for daily bread as a gift from God without the condition He had declared to Adam and in the tables of the law. Neither is it to be supposed that He was giving a form of prayer that had no application to man's exigencies. Clearly the meaning of the petition is that God would grant us the *opportunity* and *ability* to obtain and eat our daily bread as He had commanded it should be eaten—in the sweat of the face.

These are the statutes of the Almighty which fix the relations of labor to all the material conditions of mankind, and which must be the rule and guide for the Church ministry. In these statutes we find the divine solution of the labor problem, for which human wisdom and experience have no alternative. Indeed, our industrial and social experience during the present century furnishes the most abundant evidence of the necessity of an application of the divine law as our only remedy.

In the light of these commandments is it not pre-eminently the duty of the clergy to take up this great problem upon the scriptural basis and follow it until the divine requirements are accomplished? They are the chosen and ordained teachers of the people. They have voluntarily assumed the duties of that office, and by solemn vows they have undertaken to search the Scriptures to learn the will of the Most High, and to guide the people in the duties of life. The first and chief duty is that of work. Then is it not their duty to preach the gospel of work? And seeing, as they must, the multitudes who stand idle on every hand, and the unspeakable miseries that grow out of idleness, should they not at once ask, Why stand ye idle all the day, and make an earnest effort to learn the Why?

Is it not time that something was being done to learn what has become of the forty-nine out of every fifty that Mr. Wright tells us that machinery has taken the place of? Is it not time that some inquiry should be made concerning the number and condition of those whom Mr. Hewitt says are, by "improved processes" swept and "pushed out of the ranks of work into an undistinguished mass of poverty and pauperism"? Where are

these our brothers? Will not their blood, like Abel's, cry unto God from the ground?

Aside from their responsibilities as ministers of the divine law, there are other reasons which seem to show that the clergy are in the most favorable position for the dispassionate study of our great industrial and economic problems. They are equally the friends of the employer and the employed, of the rich and the poor, and altogether free from the jealousies and resentments that have grown out of the strained relations that have so long existed in the ranks of labor. The ministry have no natural or acquired self-interests to serve as against or in favor of either party; nor injuries, real or imaginary, to punish. Their natural and developed desires are for the good and improvement of all. And, unquestionably, in the churches are gathered a large percentage of the best intellect of the age, thoroughly equipped for the investigation of the great problems that have grown out of the developments of the present century.

One especially eminent advantage have the clergy over the laity in preparing for the investigation required; they have not to unlearn the economic fallacies, not of a lifetime only, but of ages, before they become capable of appreciating the actual effects of recent developments, and how to derive the greatest benefits from them.

The first step to be taken is to learn the controlling facts bearing upon the problem. The Hon. Abram S. Hewitt, in the address already referred to, said:

“The problem is not to be studied by sitting down in your library and reading books, or by taking any man's opinions as to what ought to be done. No; in business when we have a problem to solve we sit down and study the conditions. . . . What is needed is first a knowledge of the facts, a careful consideration of their nature.”

Mr. Hewitt unquestionably is right. We want the facts of to-day; the facts in the development of present conditions as a whole. What are the causes that underlie the great movements that I have shown to be going on in every direction? We want facts—facts without sentimentality—naked facts that will preach their own sermons. The most important facts of all that are

required for our instruction, are the facts that will give us reliable information of the actual amount of idleness in the country—of the number of workingmen and women who are dependent upon their labor for subsistence and comfort, in every vocation, who have practically no employment; of the number who are partially employed, and the amount of their employment or idleness, and the number who are fully employed.

Eight years ago I made an effort to obtain the facts in relation to these important matters, through the agency of the General Government, in taking the census of 1880. A memorial was prepared and numerously signed by a large number of the best known names among the clergy, in literature and education, in the administration of Government and law, of the press, manufactures, trade, and labor throughout the country, asking that a provision be inserted in the Census Bill requiring an enumeration to be made of the employment and idleness of the people.

The late Senator Davis, of Illinois, in presenting the memorial to the Senate, February 28th, 1879, called special attention to the high character of the memorialists, and in part said:

“They do not believe, nor do I, that the problem can be solved by any theory based on data not known to be reliable. What they want is authoritative information obtained by the Government to inform the people of their real condition, and on which to predicate wise legislation. Such information can be taken as a safe basis for reasoning on this important subject, and without it there can be no correct reasoning at all.

“Mr. Moody, in handing it to me for presentation to the Senate, happily observed ‘that it was the joint prayer of culture, wealth, and labor.’

“Whatever differences of opinion there may be, Mr. President, as to the cause of our labor difficulties, it is quite evident that the way out of them cannot be found without the statistical information asked for, and that the requests contained in the petition are reasonable and entitled to the careful consideration of Congress. And I am happy to say that the Special Committee on the Census have taken action on some of the subjects embraced in the memorial.”

On the same occasion Senator Hoar, after drawing attention to the great importance of the inquiry desired, and the efforts he had previously made in the House to obtain similar action, said :

“ The one thing upon which all this class of persons seem to have agreed, differing as they do among themselves in regard to others matters, is the desire that the Government would obtain for the laboring classes this statistical information for its own use and for their benefit. I have been amazed at the indifference, especially of this body, to the request of this vast number of laborers in this country, when it has been preferred heretofore, and when it has met the assent of the other branch of Congress. I trust the honorable Senator from Illinois will be successful in getting the favorable attention of the Senate to a proposition which has failed to receive it heretofore.”

The favorable action taken by the Special Committee on the Census, referred to by Senator Davis, was the adoption of an amendment to that bill, providing that the enumerators should ascertain of each person enumerated whether he or she is “employed or unemployed, and if unemployed during what portion of the year.” The Census bill became a law with this special provision as a part of it, but the officials to whom was confided the trust of taking that census, in total disregard and contempt of the law under which they acted, and their oaths of office, neglected and refused to make the enumeration required, and nowhere in their reports is the subject referred to. The result is, that to-day the people and Government are without authoritative information upon these most vital interests, or data for action in the present deplorable condition of the masses of our people.

And in other matters regarding labor and wages the census reports only serve to confuse and lead to the most erroneous conclusions. If the intent had been deliberate to prevent the gathering of the information required by the law—to hide and mislead as to the actual condition of the masses of the people—no surer course could have been pursued. Indeed, there can hardly be a doubt that the end achieved was the object proposed.

Hence the necessity of rousing the moral forces of the peo-

ple to action in these matters, and to the study of such facts as are attainable by individual and associate effort, that the people may be instructed and the aid of Government may again be successfully sought, and provision be made to guard against a repetition of the failures that attended the last census enumeration.

With the required facts in our possession the clergy, the people, and legislators will not be long in reaching correct conclusions and adopting proper measures for relief. But so long as the present state of ignorance in relation to these things shall continue ; so long as the wilfully ignorant and prejudiced may deny the most obvious facts without fear of successful exposure ; so long as the agents of Government, and others desiring to do so, can successfully withhold the information required, and mislead and delude the public with matters of little or no comparative importance, just so long will the difficulties of the situation increase. Had the last census been taken as the law requires, the present industrial conditions would never have been reached, and the further postponement of measures that will give us the required knowledge for intelligent action, will assuredly be at the cost of billions per annum to our industries and trade, with inevitable increase of the miseries of the people and destruction of life and property.

It is to draw your attention to the importance of these inquiries that I am here, and to ask of this Institute of Christian Philosophy, and the clergy of the country, the assistance that is required to make them effective. I am certain that it is within the power of the clergy of the City of New York, and its immediate vicinage, to set in motion, during the coming winter, a movement that will quickly solve our difficulties.

They are in the midst of and surrounded by millions of honest, God-fearing workingmen and women whose yoke is not easy and whose burden is by no means light. May I not earnestly beseech of you and of them to do something in the way that God has commanded to ease their yokes and lighten their burdens? Taking up this cause upon the simple principles of divine law, the organized influence of the united Churches will be found irresistible, where individual action can be of little effect. It is by associated effort that the greatest good may be reached.

Here are responsibilities resting upon the Churches that can be neither overestimated nor evaded, with opportunities for useful work and possibilities of achievement unequalled by anything heretofore presented. To allow them to pass unimproved because of indifference and neglect will prove a disaster unparalleled and a stigma ineffaceable.

REMARKS ON MR. MOODY'S LECTURE.

BY REV. J. B. LOWBER, PH.D., Paducah, Ky.—Society is the result of law impressed upon the very nature of man. Government is an instrument in the hands of society for its protection. This labor question can only be solved in the light of eternity.

It is a mistake to suppose that machinery is a curse. In the economy of God it is intended to give man rest from toil, so that he can have more time in which to cultivate his highest faculties, and prepare for eternity. If a few men, like greedy boys, gather everything for themselves, of course others will suffer. But God has placed His stamp of condemnation upon such. It is either use or lose. The nation or individual that does not properly use what is acquired will certainly lose it. The abuse of the gold of Mexico and Peru that flowed into the Spanish treasury is an illustration of this. The man who acquires wealth simply for himself and family will accumulate sorrows for his descendants. This is well expressed by the poet:

“ Now many a man from love of self,
To stuff his coffers starves himself;
Labors, accumulates, and spares,
To lay up ruin for his heirs.
Grudges the poor their scanty dole,
Saves everything except his soul;
And always anxious, always vexed,
Loses both this world and the next.”

No man, who understands the laws of sociology, can become a miser, for it will certainly ruin him and his family. An old miser by the name of John A. Comb once asked Shakespeare what epitaph he would write for him when he was dead. The poet answered thus:

"One in a hundred lies here in this grave,
It is a hundred to one his soul is not saved;
If any should ask who lies in this tomb,
O, ho, quoth the devil, he is my John A. Comb."

The laborer as well as the capitalist is to blame for the present conflict. He is constantly violating the laws of economy, and cannot, of course, prosper so long as he does this. He spends his wages for alcoholic drinks, and soon makes a pauper of himself. It is an admitted fact that the liquor-traffic is one of the greatest causes of poverty in this country. Its abolition would do much towards solving the labor problem. It is a traffic more injurious to society than slavery ever was. It is a parasite upon the body politic ; and government, which is designed for the protection of society, should prohibit it. I believe that we should do by this traffic as the old Scotch woman wanted to do when they talked of burying the devil. We should bury it with its face downward, so that if it ever gets alive again the more it will scratch the deeper it will go.

MRS. HELEN CRANE, Asbury Park, N. J.—As a member of this Institute I may as well be the pioneer woman who speaks from this platform ; for I am a Methodist, and we Methodist women have been brought up to *speak in meeting*.

I cannot think that the distress and poverty of the poor mechanic or artisan is brought upon him by the increase of machinery, but the rather through improvidence, laziness and bad habits. Having been for many years connected with city charities and mission work, and in pastoral visitation with my husband, I have had unusual opportunities for personal observation. Let me cite the case of one of our large manufacturing cities during the "hard times" of 1878. The locomotive and iron works, on which many of the men depended for employment, were either closed or running on short time. The employés were what might be called skilled laborers, but through drinking and improvidence they had saved nothing, and consequently many were in want and became applicants for relief from the city. During this condition of things scores of men stood around the street corners absolutely refusing to work

for a dollar a day. Large silk and cotton mills in the city, running on full time, gave employment to hundreds of women and girls who became the breadwinners of many families. If those idle men had gone home, washed the dishes and the children's faces, and tidied up their homes, I could have had some respect for their manhood; but, no, they preferred loafing, and when the tired women came home after ten hours of toil they would have to do the housework for the family. I have noticed that the men who are the loudest in their demand for short hours and large pay, are very willing that the women of their households shall toil for twelve or fifteen hours a day for their emolument or personal comfort. Take another example. At a certain railroad centre the population is largely made up of railroad employés. These men, mostly temperate, with good wages and with sure pay, are notably improvident, running store accounts in advance of their wages. This prevailed to such an extent that an appeal for Church or benevolent objects to be at all successful must be made just after pay-day.

Mr. Moody's paper lays the matter of relief for these existing distresses upon the ministry and the Church, and hopes for organized effort in that direction by the clergy of New York City.

Large numbers of these people are not found in the churches. The work of the minister in his pulpit is paramount, but he who can organize the Church forces to carry the gospel of cleanliness, industry and temperance into the homes of non-attendants at church does a grander service to the Church and the world. The fight against sin in all forms must ever be a hand to hand fight, and he who comes nearest to the hearts of the people by personal contact with them will win the greatest victories.

THE LABORER NOT A COMMODITY.

The following contribution to the discussion of the Labor Question, by Rt. Rev. HENRY C. POTTER, was read at the Summer School of 1886, at Key-East, N. J., and has appeared in an Epistle addressed by the Bishop to the clergy of his diocese.]

CHRISTIANITY brought into the world a new law of brotherhood, and both by precept and example taught men that they to whom has been committed the stewardship of exceptional gifts, whether of rank, wealth, learning or cleverness, are not to treat them as their own, but as a trust for the whole community. "Bear ye one another's burdens and so fulfil the law of Christ;" "Ye that are strong ought to bear the infirmities of the weak;" "Charge them that are rich in this world that they be ready to give, glad to distribute;" these words and others like them did not mean the mere giving of doles and indiscriminate distribution of alms. It is not by gifts such as these that the wounds in the body-politic are to be healed, and the parted tendrils of a dissevered humanity bound together; and it is an open question whether municipal and institutional charity has not irritated as much as it has soothed or healed them. What the laborer wants from his employer is fair and fraternal dealing, not alms-giving, and a recognition of his manhood rather than a condescension to his inferiority. And it is at this point that the outlook is most discouraging. The growth of wealth among us has issued not in binding men together but in driving them apart. The rich are farther from the poor, the employer from his workmen, capital from labor, now, than ever before. Too many know less and less how the poor live, and give little time, or none at all, to efforts to know. The wage of the laborer may be, doubtless in most cases it is, larger than it was thirty years ago; but his wants have grown more rapidly than his wages, and his opportunities for gratifying them are not more numerous, but less. He knows more about decent living, but his home is not often more decent, and daily grows more

costly. His mental horizon has been widened, but fit food for it is no more accessible. Instincts and aspirations have been awakened in him which are certainly as honorable in him as in those more favorably situated, but wealth does little either to direct or to satisfy them. The manners of the poor, it is said, are more insolent and ungracious than of old to the rich, and this discourages efforts to know and serve them. I do not see why poverty should cringe to wealth, which is as often as otherwise an accidental distinction, and quite as often a condition unadorned by any especial moral or intellectual excellence. But we may be sure that the manners of the poor, if they be insolent, are learned from those of people whose opportunities should at least have taught them that no arrogance is more insufferable or unwarrantable than that of mere wealth. And if we are reaping to-day the fruits of these mutual hatreds between more and less favored classes, we may well own that the fault is not all on one side, and that it is time that we awaken to the need of sacrifices which can alone banish them.

These sacrifices are not so much of money as of ease, of self-indulgent ignorance, of contemptuous indifference, of conceited and shallow views of the relations of men to one another. A nation whose wealth and social leadership are in the hands of people who fancy that day after day, like those of old, they can "sit down to eat and drink and rise up to play," careless of those who earn the dividends that they spend, and pay the rents of the tenement-houses that they own, but too often never visit or inspect, has but one doom before it, and that the worst. We may cover the pages of our statute-books with laws regulating strikes, and inflicting severest penalties on those who organize resistance to the individual liberty whether of employer or workman; we may drill regiments and perfect our police; the safety and welfare of a state are not in these things, they are in the contentment and loyalty of its people. And these come by a different road. When capitalists and employers of labor have forever dismissed the fallacy, which may be true enough in the domain of political economy, but is essentially false in the domain of religion, *that labor and the laborer are alike a commodity*, to be bought and sold, employed or dismissed, paid or

underpaid as the market shall decree; when the interest of workman and master shall have been owned by both as one, and the share of the laboring man shall be something more than a mere wage; when the principle of a joint interest, in what is produced, of all the brains and hands that go to produce it is wisely and generously recognized; when the well-being of our fellow-men, their homes and food, their pleasures and their higher moral and spiritual necessities, shall be seen to be matters concerning which we may not dare to say, "Am I my brother's keeper?" then, but not till then, may we hope to heal those grave social divisions concerning which there need to be among us all, as with Israel of old, "great searchings of heart."

THE LABOR TROUBLES AND THE SABBATH LAW.

[This contribution to the discussion of the Labor Question at the Summer School at Key-East, August, 1886, made by CHARLES F. DEEMS, the President of the Institute, has since been published in the *Methodist Review*, edited by Rev. Dr. Curry.]

SO many impertinent and nonsensical things have been said and written on the Sunday question, that not a few intelligent people are tired of it and turn away from its study. So, likewise, has the Sabbath Question been so generally discussed from the religious side as to divert attention from its scientific importance. Let us, then, examine briefly the scientific aspects of the case, and the connection of the fundamental law, known from earliest times, with the Labor Question of the present times.

First of all, it must be observed that, if we had no inspired books and no religious teaching in regard to the Sabbath, it is plain that our scientific investigation would lead us to the detection of the fundamental law in the case. Thus it is observed, in regard to the toughest materials which can be manufactured into utensils of civilization, that there is in them the equivalent of a seventh-day law. A rail-car or private carriage, a vehicle made of wood and iron, will last longer in its separate parts and

in their combination provided perfect rest be given them every seventh day. A steam-boiler will do its work longer and better if cooled every seventh day. It is found that more can be got out of an estate descending in a family if its fields be left fallow every seventh year. Now these fields are made up of a soil combining several elements. It does not seem to have been determined whether this requisition for the seventh-day rest be in the elements or in the atoms thereof, or in the combination of the elements into what we call soil. As yet that has eluded scientific investigation; but the fact remains, that acres of soil contain in themselves this virtual sabbatic requisition.

Repeated experiments have shown that the same thing is true of animals. A draft-horse will pull as much on the seventh day as on the first if he have good stabling, good grooming, and good food. The same may be said of his capabilities on the fourteenth day and on the twenty-first day under similar favorable conditions; but in the long run of five years he shows the effect of the neglect of the observance of a law written in every fiber of his body. A railway company using two hundred horses, as near the same age as they can be procured, and running one hundred of them continuously and resting the other hundred each seventh day, will soon begin to discover the difference, and the tables of the broken-down and prematurely superannuated horses will begin to tell their story.

The same holds good in regard to men, whether considered as to their physical labor or their mental exertions. Two lawyers of equal physique and brain power, as nearly as can be determined at the beginning of their course, may go on working; one devoting himself to his profession three hundred and sixty-five days in the year, and the other carefully abstaining on every seventh day from all thought in regard to questions connected with either the theory or the practice of his profession, will not require a score of years to show the difference of the two treatments. Religion does not seem to have anything to do with it. A clergyman may be a saintly man, as saints are counted, and yet if he do not set apart one day in each week of seven days in which he will persistently abstain from all theologic study and all pastoral work, he will by and by begin to endure the penal-

ties of a violated law. This is one reason why there are so many and such early break-downs among Christian ministers. There is, perhaps, no body of men so largely Sabbath-breakers as is the Christian ministry. The regulations of society compel other men, in some degree, to abstain from work one day in the seven. The banks and exchanges are closed one day in the seven; so are the courts. There are many other brakes put upon human activities; but the clergyman may begin on Monday morning, and work every day and night of the week, sitting up late on Saturday night to finish his sermon, and then attending to his Sunday-school and preaching, and administering the sacraments and, perhaps, officiating at a funeral on Sunday, and the next morning commence the same round again for another week. And he may do all this without ever attracting any attention to himself as a Sabbath-breaker. But the law of his physical and mental constitution is all the same. Bodily health, prolonged capability to work and to enjoy life, and long life itself, are three things dependent upon having the equivalent of a seventh-day rest. The bishop and the atheist are equally amenable to this law. The time of rest may or may not be employed in religious exercises; but the demand for abstinence on the seventh day from the courses of activity of the other six days is imperative. The observance of this law is indispensable for the enjoyment of the life that now is, whether or not there be any life hereafter.

No law has been more plainly found imbedded in the fibres and nerves of animals, and in the brains of the highest animals, than this Sabbath law. There seems to be none other that has been longer known to the human race. There are intimations of it in the oldest literature extant. There is no ascertaining when it was first known, because in the the oldest writings in possession of the race it is assumed as already well known, being at that time presented to human thought in its religious connections, apparently without the slightest suspicion of its having what we are accustomed to consider a scientific foundation, as in these latter days we have discovered it to possess. In the oldest of the sacred books it is utilized for religious purposes. The God of the Hebrews, through the first ministers of His religion, in nationalizing a people on the basis of a theocracy,

appointed for them one day in the seven, one year in the seven, and one year at the close of the seven times seven years for certain religious observances, to be connected with certain civil arrangements; and God made these the vertebrated column of the whole anatomy of that theocracy.

It would seem that no religion, published under any sanctions, human or divine, could maintain itself among any people for any considerable series of years which had not in nature the foundation on which to build. The Israelitish system had that foundation. The beats of all the pulses of the universe are in octaves, marking the closes of the series of seven. It is not difficult to see that if a religious man observe this, and then be asked why the God of the Israelites should have promulgated the system He is reported to have done in the old Hebrew books, he would say something like this: All religion is based upon a recognition of God, of God's proprietorship of the universe. The seventh-day law is God's assertion of His ownership of time; that is to say, of human life. The sabbatic year is the assertion of God's ownership in the land. The year of jubilee, in which real estate reverted, debt was cancelled, and slaves liberated, is God's assertion of His ownership of every thing which can be considered property. The difference between religion and non-religion would seem to lie in the difference between acknowledging God's universal proprietorship and the claiming of that proprietorship for human beings.

The scientific question whether religion or non-religion is better, may be determined by an investigation of the results on a large scale of an acknowledgment of God's proprietorship in every thing, or in the contrary, practically living upon the supposition that land and time and all the products of industry belong absolutely to the race. Could we have a large territory inhabited only by people who in every thought and act of their lives acknowledge the proprietorship of God, whose religious exercises perpetually remind them of that truth and kindle in them emotions appropriate to the reception of such a truth—and then could we have another territory of equal size, and equally populated, but by people who thoroughly reject God's proprietorship, and never allow in an individual case any relig-

ious service which acknowledges that truth—and could we then compare the result upon the physical, intellectual, moral, and social condition of the two peoples at the close of a sufficiently long season of trial, we should have a very full, clear, and sufficient evidence to settle this question forever. But as things are, we have to take the peoples in which one or the other of these theories dominates. Take, then, a community in which there is a rational observance of the Sabbath law—I do not say of the rabbinical Sabbath, nor of puritanical Sunday regulations, but a rational keeping to what is scientifically provable to be the law in the case—and compare that community with another in which, so far as it ever has been done, the Sabbath idea is, not to say rejected, but simply ignored, we shall begin to have much light on this subject.

We come now to look at the connection of this law with the present labor troubles.

These troubles seem to arise from the strained relations of capital and labor, and they come to a head where large capital and many hands are employed. It is charged upon the part of labor that it is not sufficiently remunerated; it is charged upon the part of capital that it cannot make out of the labor it employs enough to justify an increase of remuneration. Going behind these two statements, we find that ordinarily the trouble bursts out where there is a large amount of capital brought together, and employed by a corporation using a great number of hands to carry on this work. On the side of capital it will be observed that there is usually a violation of the Sabbath law, so far as both the corporation and the laborers are concerned. The corporation does not take pains to rest its men and its machinery one day in every week. Now, according to the Sabbath law, that machinery must deteriorate and those men must do their work badly; so that on both sides the income of a corporation is annually diminished by the neglect to observe a law as fixed as the law of gravitation. A railway whose trains should stop at twelve o'clock some night, and lie still for twenty-four hours, while all its employees are perfectly at rest from their labors, whether in worship or whatever else may be necessary for recuperation, would in the course of the year, no doubt, largely increase its

net profits by diminishing its expenses. Then there would be a further increase from the great diminution of injury done to the machinery by accidents. The accidents must be much greater where physical laws are not observed than where they are. Switchmen, brakemen, and engineers working on, seven days in each week, by and by come to such a state of brain, nerve, and muscle as to increase their liability to accidents which destroy property.

Then, too, the corporation injures itself by paying men six days' wages for a week's work, whereas men should always be paid a full week's wages for six days' work, so that the pot may be kept boiling while the men are observing the law of recuperation. If it be said that this is a Utopian idea, the reply is, that such a statement implies that it is impracticable for rational beings to devise reasonable ways of keeping well-known physical laws. If that be true, then there can be no reform of any kind, and no place for any discussion. But on what ground can it be established that such a thing is impracticable? Suppose it were admitted that the public weal demanded the running of all the cars, on both passenger and freight lines, on a certain railway, day and night continuously, through consecutive years. Even that would not necessarily render the observance of the Sabbath law impracticable. We do let our men off for purposes of sleep. Neglect of sleep tells so quickly, disastrously, that we are compelled to listen to the imperative demand; and so men work through a limited portion of the twenty-four hours, and it is called a week's work, whether it be six, eight, ten, or fifteen hours a day. Twenty-four hours make a day, but we never demand twenty-four hours for a day's work, and we should not demand seven days for a week's work. It would be quite practicable to make such relays of men in every department as we do of engines, even if the work of the road, in all its parts, went on continuously; and then each man would be able to observe the Sabbath law.

Moreover, the corporation does itself the injury of deteriorating the quality of all its workmen. If, for the sake of wages needed by wife and child at home, a workman can be induced to go forward, week in and week out, the man's moral sense, as well as his

brain power, becomes deteriorated. Laying aside all religion, on any other ground on which the necessity of telling the truth or abstaining from stealing can be placed, on that same ground rests the Sabbath law. If I am the employer of five hundred men, they know that if I induce them, by hope of reward or fear of loss, to work on against the law of their nature in respect to rest, I would, for the same consideration, have them work on in violation of veracity or of right in property. Apart from religious considerations, if there be any obligation on earth it is equal in all these three departments; and if I become party to the violation of the Sabbath law by my employees, I become party to a lessening in them of a high regard for the right of property; if, then, they abstract what belongs to me, I have simply myself taught them to do so. A man cannot long violate the Sabbath law without becoming untruthful and dishonest, any more than a man can injure his brain without injuring his stomach, or *vice versa*.

Now let us turn to the laborer's side. The violation of a law of nature in his person brings on an abnormal sanitary condition, one which ordinarily shows itself in a demand for some artificial stimulant to make up for the lost rest. In vast numbers of cases, intemperance is a natural physical result of a violation of the Sabbath law. Intemperance is costly in three ways. In the first place it causes the laborer to lose a portion of his time, and so reduces his wages. In the second place it causes him to do his work in an inferior manner, and thus lessens his stipulated wages. In the third place, in addition to the prime cost, it involves expenditures not otherwise required. So we see that, from whatever motive the laborer may set at defiance the Sabbath law, he will find his penalty.

Let us now reverse the picture. Suppose every capitalist, in employing laborers, paid each man seven days' wages for six days' work, so that he should have no disquietude on the seventh day in taking the demanded and absolutely indispensable rest. Suppose he gave repose to all his machinery during a seventh day, and suppose, at the same time, every laborer absolutely abstained from all the usual employments and every other kind of wearing and physical labor, and rested the seventh day; would there not begin immediately to ensue a relaxation of the

strained relations of capital and labor? If any dependence is to be placed upon the results of scientific investigation of the laws of labor, such a relaxation *would* take place, at least to such a degree as to make the relations approximately harmonious. There would thus be an immense relief, and thereafter all discussions between the two parties would be less nervous, passionate, and spasmodic, and every question could be examined in a light which would show its relations to the interests of both parties.

It has not been our purpose to make this paper a comprehensive discussion of the labor troubles in all their aspects, but to confine it very strictly to the examination of the relations of capital and labor to one single, settled law of nature and of human society.

VIEWS AND REVIEWS.

HUXLEY'S DENIAL OF MATERIALISM.—On this subject President Magoun, of Iowa College, writes to *CHRISTIAN THOUGHT*: “Mr. Huxley replies in the *Fortnightly Review* in a lively and somewhat supercilious reply to Mr. W. S. Lilly in a previous number on ‘Materialism and Morality.’ Those who will be glad to read that he does not believe in Materialism, will find their gratification checked by finding also that he does not believe in Spiritualism, as Mr. Lilly defines it. This is quite consistent for an advocate of Monism. He believes in neither matter nor spirit as distinct from each other. He would take Idealism as a system of thought in preference to Materialism, but is not inclined, nor does he feel bound to choose either. Yet he goes on to reassert that consciousness is a function of the brain, and that there is no one who doubts that ‘in the proper physiological sense of the word function, it is, in certain forms at any rate, a cerebral function.’ As to the latter assertion, we know a good many people who utterly disbelieve anything of the kind, though we also know many who would be glad to believe it if they could, and others who are restrained from asserting it by a lingering respect for the established and proper use of words. Per-

haps Mr. Huxley does not know that the word 'function' is never used in psychology, save infrequently in a figurative way, and that consciousness is not a name for anything physiological. Adhering, then, to its correct use as the name for an act and faculty of mind purely and solely while cerebral functions are, of course, purely physical and never mental, no one, unless he has a prejudice against clear thinking will assert that 'consciousness is a cerebral function.' To do so is to pronounce the mind a material thing. It was common to respect these distinctions in philosophical and scientific literature until physicians turned metaphysicians and physicists claimed to be, *ipso facto*, experts and authorities in psychical investigation. Here is a specimen of Mr. Huxley's fallacies when he ventures beyond his own field :

" 'If one of the nerve bundles in a man's arm is laid bare and a stimulus is applied to certain of the nervous filaments, the result will be production of motion in that arm. If others are stimulated, the result will be the production of the state of consciousness called pain. Now, if I trace these last nerve filaments, I find them to be ultimately connected with part of the substance of the brain, just as the others turn out to be connected with muscular substance. If the production of motion, in the one case, is properly said to be the function of the muscular substance, why is the production of the state of consciousness, in the other case, not to be called a function of the cerebral substance ?'

" Mr. Huxley's conclusion is, that 'we are all agreed that consciousness is a function of matter, and that particular tenet must be given up as a mark of Materialism.' Not so fast! There are muscular sensations, indeed, unaccompanied by consciousness of the sense-perceptions appropriate to motion ; but there are others accompanied by sense-perceptions and the consciousness of them. The stimulants applied to the nervous filaments have a different relation to such consciousness, the slightest thought will show, from what they have to the motion. In the latter case, the motion being involuntary, and no perception or consciousness attending, Mr. Huxley's assertion that it is all an affair of matter, may be true, but where these concomitants are

present it cannot be. There is another and a different factor involved, viz.: mind. Denying the difference between them, ascribing two sets of attributes to matter, one set being mental attributes, as the Monists do, they ascribe the will, perception, consciousness, and motion all to one source, viz.: matter. This is clearly Materialism. If it is not, Monism should be called Dualism. So when Mr. Huxley repeats his prophecy that a growing scientific appreciation of matter and force will 'banish from thought what we call spirit and spontaneity,' he manifestly gives up the field to Materialism. This denial of free will, *i. e.*, that the will is a cause, or adequate power to produce effects of its own, is the same thing over again. All power is ascribed to matter—not only physical force, but psychical power, under the unproved and self-contradictory hypothesis that no other substance exists but matter. Molecular change exhausts the category of causations. Spirit, soul, mind, is only apparently real—only matter is real. If anywhere any material change accompanies a psychical one, the latter is only effect, the former real cause—though we know the contrary every time we voluntarily move a muscle."

HOW LONG HAS MAN BEEN ON THE EARTH?—The late gifted Dr. Hodge, of Princeton, in a course of lectures delivered last year in Philadelphia, expressed the opinion in regard to the length of time since the creation of man, that "There is no reason to believe it was more than fifteen or sixteen thousand years; but whether more or less, revelation has not informed us." And hereupon the *Central Presbyterian* of Richmond, one of whose editors is Prof. James C. Southall, a high authority on all scientific and especially geological questions, thus comments:

"It is contended by many that man has been on the earth a hundred, two hundred, five hundred thousand years. Indeed, Prof. Whitney, of Harvard University, and Prof. O. C. Marsh, of Yale, contend that human relics (stone mortars, etc.) have been found in California which belong to the tertiary geological age, and whose antiquity would therefore have to be measured by even millions of years. The French archæologists, led by M. de Mortillet, also contend that man, or a being betwixt man and

the apes, has left his traces in the tertiary deposits at Thenay in France. Prof. Capellini, of Italy, also affirms that he has found similar evidences in Italy. All the remains of man thus found, either in the quaternary or tertiary geological deposits, imply that the men who fabricated the rude implements discovered, were in the savage state ; in fact, that at the date of the oldest chipped flints discovered, he was hardly a human being. The bearing of this on the question of the evolution of man is obvious, and does not require to be dwelt on. Let it once be admitted, on the evidence of these chipped flints, that man has been on the earth indefinitely, and the doctrine of the evolution of man receives a powerful support. The Bible gives us in Adam a man who was not in the savage state. Cain, his son, built a city. It gives us a man who lived nearly a thousand years. If man appeared ages ago, he certainly commenced very low in the scale, and we should be almost compelled to accept the gradual evolution of man from the lower animals.

“2. But again : How are we to reconcile such an indefinite antiquity with the Bible chronology ? We readily allow that that chronology cannot be fixed with precision, but we are compelled to believe that the data furnished, gives us at least an *approximation* to the truth. Those who are prepared to stretch out the sojourn of man on earth to any imaginable figures, claim that they are at liberty to do so, because there are often gaps or omissions of names in the Hebrew genealogical tables ; all of which is true, and while it is *possible* that hundreds or thousands of names have been omitted in the line from Adam to Noah (the Bible account giving only ten names in all), this is contrary to *probability*, and cannot satisfy any fair-minded person. Our received chronology may perhaps be extended in this way a thousand years, but hardly more, as is suggested by the fact that we find the duration of human life not diminished between the time of Adam and that of Noah. It is improbable that the earth was inhabited by men, whose term of life was eight hundred or a thousand years (continuing unchanged to the Flood), for fifteen, twenty, or a hundred thousand years before the building of the Ark.

“3. If man did live on the earth for a hundred thousand years

before the Flood, it was *a savage man*, for nobody pretends that the civilization of Babylonia or Egypt extends back more than six or seven thousand years, or that there are traces of civilized man anywhere back of some seven thousand years ; and these men were not only savages, but savages enjoying a longevity of some nine hundred years. All this creates a demand on our credulity which few candid minds would be able to command.

“ 4. The relics of man found in the drift of the river-valleys are found not only in Europe, but in India and America. Therefore, if these men lived fifteen, fifty, or a hundred thousand years ago, the human race had spread over all the continents before the Flood, and those who accept it are shut up to the theory of a universal deluge in the time of Noah, which covered the tops of the Himalaya Mountains, the Andes, and the Alps, and in which the entire animal and vegetable life of the globe perished, leaving the whole face of the earth without a living object. The difficulties in regard to this, and the stupendous series of miracles involved, are immeasurably greater than are offered by a partial flood, coextensive with the human race, but covering only a limited area in Western Asia, as propounded by Hugh Miller and Tayler Lewis, and accepted in the Bible Commentary, and by most modern commentators on the Noachian Deluge. At the close of the glacial epoch, say some seven or eight thousand years ago, when man appeared, the continent of Europe (and the other continents) was, as the geologists tell us, almost uninhabitable for man, because the continents were at that time to a great extent submerged or covered with ice (and characterized by a most inhospitable climate), and therefore it is extremely probable that the human race had not been able to spread far from their original centre in Western Asia.

“ 5. Concessions just at this time about the antiquity of man are particularly unfortunate, because prudent archæologists, after thirty years' discussion, now admit that man was post-glacial, and the tendency of all the most recent observations on the drift deposits is to bring the close of the glacial age within a period of some 10,000 years. Take, for example, the calculations based on the recessions of the Falls of St. Anthony on the Upper Mississippi, and the formation of the Niagara gorge, both of

which commenced at the close of the glacial epoch, and recent observations of the most careful geologists make the lapse of time about 10,000 years. Dr. Andrews reached the same result from his study of the raised beaches of the great lakes.

"6. Now establish the fact that man appeared on the earth within this period, and the evolution of man is an exploded theory. The question is settled."

DIFFICULTIES IN DANIEL.—Before the discovery made by Sir H. Rawlinson, in 1854, when deciphering certain clay cylinders, found in a corner of the Temple of the Moon, it was common to identify Belshazzar with the Nabonadius of uninspired historians. Ewald, Winer, Browne, Auberlen, and others, did this, but sceptics were able to point out discrepancies between Daniel's account of Belshazzar and the account of Nabonadius by the classic and Chaldaean historians, which were subversive of all faith in Daniel's accuracy as an historian, on the part of those who received this theory. It was certainly open to the defenders of the Bible to contend that Daniel was as likely to be right as Herodotus or Berosus, but that would be no answer to sceptics, to whom it is a presumption in favor of any writer's accuracy, that he contradicts the Bible. It was said at the time we speak of that Daniel's last king of Babylon was a son of Nebuchadnezzar, but that the real king of Babylon, this Nabonadius, was not of the family of Nebuchadnezzar at all, but a man elected from among the conspirators who had slain the previous King of Babylon; that Daniel's last king of Babylon died in the city the night it was taken, but that Nabonadius, after being defeated by Cyrus, took refuge in Borsippa, was there when Babylon was taken, and was spared by the conqueror, who actually made him Governor of Carmania! Here are hopeless discrepancies, said the sceptic. He cannot say that now. Cuneiform discovery has triumphantly vindicated the truth of Bible history. As in a hundred instances, it only needed fuller knowledge to reconcile the supposed discrepancies. It turns out that Nabonadius and Belshazzar are not the same person, but father and son. The inscriptions of Nabonadius himself refer to him as "Belshazzar, my eldest son, the offspring of my heart." But

there is evidence also that he was a grandson of Nebuchadnezzar, Nabonadius, to strengthen his position, having married the daughter of Nebuchadnezzar. The queen of Dan. v., 10, was the queen-mother. She calls Nebuchadnezzar "thy father," but "son" and "father" are often used in Scripture in the sense of "grandson" and "grandfather." In Gen. xxix., 5, Laban is called the "son of Nahor," yet Nahor was his grandfather. Daniel's account implies what everything in the cuneiform cylinders makes probable that Belshazzar had been made joint king with his father. Nabonadius had done with his son what we know Nabopolassar had done with his son Nebuchadnezzar. When Nebuchadnezzar besieged Jerusalem at the time referred to in Dan. i., 1, he was only second "King of Babylon," for his father, Nabopolassar, was still living. And now we come upon one of those "undesigned coincidences" which are the clearest proofs of the honesty and accuracy of the inspired historians. Why did Belshazzar only promise to make Daniel "*third ruler in the kingdom.*" Once no answer could be given to that question. The reason is now clear. He himself *was only the second ruler.*

UNSOLVED PROBLEMS.—Prof. Charles A. Young names four problems in solar physics whose solution is urgently demanded, and would be a great advance in astronomical science. First, an explanation of the peculiar law by which the sun's surface at the equator makes a complete rotation in about 25 days, while a place half-way to the poles requires $27\frac{1}{2}$ days; second, an explanation of the occurrence of the spots in periods (each period or cycle being about eleven years), and of their distribution in the two zones lying between the tenth and thirtieth degrees of latitude on each side of the equator; third, a determination of the variations in the amount of heat radiated at different times and from different points on the solar surface; fourth, a satisfactory explanation of the relations of the gases and other matters above the photosphere, or visible surface, to the sun itself—the problem of the corona and the prominences which appear to view during total eclipses. There are other interesting mysteries, but these are the most important. They are quite as great as any mystery

connected with God. We do not suffer these physical mysteries to cut us off from the enjoyment of all the blessings we derive from the sun; neither should we allow any metaphysical mysteries to deprive us of the unspeakable benefits we may receive from the Sun of Righteousness.

INTELLECTUAL VANITY AND UNBELIEF.—Rev. Dr. Eskine N. White, of New York City, accurately describes a class of make-believe unbelievers in the following:

Men from intellectual pride sell their birthright by turning away from God and professing to find a god among the philosophical idols of the day. The temptation comes in this form: "If I wish to prove my intellectual vigor I must not accept anything upon trust. I must demand that everything be explained so that its mysteries be cleared up; then I must not accept anything as true that cannot be proved by the successive steps of logic or demonstrated by the exhibition of scientific experiment. The old faith of my fathers is very simple and very comforting, but I must not be misled by any unexplained instincts of my nature, nor deluded by any pretended revelation from the unseen world. To be sure thousands of women and children, and of simple-minded men have accepted this faith in God and Christ without any very searching intellectual examination, but I require proof."

Now, all this is very well if it is the honest utterance of a man who truly desires to know the truth and who with every faculty awakened proposes fairly to examine the evidences for Christianity; such an honest seeker will be aided by God. But alas! too many are possessed with intellectual vanity, while they have neither intellectual strength nor intellectual honesty. They hear of one and another prominent scientist who amuses himself as an unbeliever; or as the expression now is, an agnostic, or a positivist, and it flatters their vanity to say that with such we take our stand. They make no original investigation. They make no earnest study of evidences. If they reach anything upon the subject, it is upon the destructive side. They sneer at the idea that any new thoughts can be given them that will support the old faith. They withhold assent and pose as un-

believers, and think it speaks well for their intellectual independence that they are disciples of this or that scientist. Now, no one more than I approves of independent thought—of an earnest determination to be able to give a reason for the hope that is in one. I rejoice to know that any man is honestly asking for proof even of the highest divine truths, but I do say that for any man from intellectual vanity, from a desire to appear to understand what he has never really studied, from the ambition to call himself by name of this or that great master, to turn aside from the faith of his fathers, to shut his eyes to the signs of God's presence, to steel his heart against the influence of the Holy Spirit, is "to sell his birthright for a mess of pottage."

MATERIALISM SCIENTIFICALLY IMPOSSIBLE.—Prof. Halstead, of the University of Texas, makes the following very acute and strong argument, from the doctrine of the Conservation of Energy.

"Scientists have demonstrated a universal natural law which rules and embraces all processes in the material world; which expresses a perfectly general and particularly characteristic property of all natural forces, and which as regards generality is to be placed by the side of the unalterability of mass. The connections between the various natural forces which modern science has revealed are extraordinarily numerous; but all prove and prove over again that the total quantity of energy in the universe remains unchanged throughout all changes. If a certain quantity of mechanical work is lost, there is obtained, as experiments made will demonstrate, say an equivalent quantity of heat, or, instead of this, of chemical force; and conversely when heat is lost, we gain an equivalent quantity of chemical or mechanical force; and again, when chemical force disappears, an equivalent of heat or work; so that in all interchanges between various natural forces, energy may indeed disappear in one form, but it has only changed into an exactly equivalent quantity of some other form; it is thus neither increased nor diminished, but always remains in exactly the same quantity, and this law holds good for the processes in organic nature. If, now, mind is a part of the material world; if what we call mental energy is

really a part of the sum of real energy connected with matter in this universe, then some of this invariable quantity of energy exists from time to time as mental energy, and so that we would expect to be able to say that a certain amount of chemical energy disappears but reappears as mental energy, or perhaps disappears as mental energy but reappears as mechanical energy or heat. But the absolute tests of science demonstrate that such is never the case. No bit of physical energy ever disappears as physical energy to become even for an instant mental energy. There is not a single point in the series of changes which take place in the brain at which all the energy is not in actual existence as physical energy. There is not a point where anything of the nature of thought could be inserted as a possible link in the chain of transformations of energy. Thought and physical energy, then, are totally different in essence and kind, and one can never be transformed into the other. Therefore materialism is scientifically impossible."

MR. HERBERT SPENCER in the *Nineteenth Century* for May concluded a series of articles on "The Factors of Organic Evolution." It is important to have from so accomplished an advocate, who is accepted by the out-and-out evolutionists, an opinion on such a subject. As one reads these papers he wonders at the mingled strength and weakness of the reasoning on which the hypothesis rests. There is no weakness in Mr. Spencer's writing; it is clear and vigorous. But the final conclusion, which seems to be a section tacked to the last paper, not because it is necessary or because it is vitally connected with what precedes it, but because Mr. Spencer wished to say it, is amazing. He alludes to Prof. Huxley's address at the unveiling of the statue of Mr. Darwin in the South Kensington Museum, and proceeds on this wise: "Deprecating the supposition that an authoritative sanction was given by the ceremony to the current ideas concerning organic evolution, he (Huxley) said that 'science commits suicide when it adopts a creed.'" The words are not used in a religious sense. They mean that a scientific creed worthy of unhesitating belief does not exist in Mr. Huxley's opinion. And Mr. Spencer endorses the sentiment. The

words mean that the scientific observer should have a perfectly free mind looking out of his eyes; should see facts as they are, with no regard for existing opinions, and make such deductions only as the facts evidently declare. To have a creed, to go about applying received principles is an injury, a hindrance; as Mr. Spencer adds, biologists in applying their belief in regard to the origin of species "have been narrowed."

While there is truth in these cautions, there is also a very humiliating confession. Such gentlemen as Huxley and Spencer being the judges, the outcome of the earnest and incessant scientific investigations of the past thirty years, the patient and laborious watchfulness, the dissection and examination with the microscope, the enormous accumulation of facts, is not a scientific system which is helpful, but a creed which narrows and destroys the man who accepts it and takes it with him into the field of observation or employs it as a guide or assistant in the process of educating principles from facts. No comment on such an admission is necessary.

Another important statement which occupies a large part of this last paper, which, indeed, is the chief theme of the paper, is that the influence of environment is often exhausted upon the exterior of organisms and does not affect the interior constitution or action. "The operation of those forces which produced the primary differentiation of outer from inner" is a fair specimen of the language used. We have written "is often exhausted," but Mr. Spencer's language leads to the inference that it is usually exhausted on the exterior of organisms. Everybody will see at once how mightily this fact tells against the assertion that environment, that is, the circumstances in which it lives, have a mighty influence in evolving a new species out of an old one. If the environment does not touch the interior it cannot help to or produce such an evolution.—*Christian Intelligencer.*

A QUESTION FOR A LAWYER.—While Hopu, a young Sandwich Islander, was in England, he spent an evening in company where an infidel lawyer tried to puzzle him with difficult questions. At length Hopu said: "I am a poor heathen boy. It is not strange that my blunders in English should amuse you.

But soon there will be a larger meeting than this. We shall all be there. They will ask us only one question, namely, 'Do you love the Lord Jesus Christ?' Now, sir, I think I shall say yes. What will you say, sir?'" When he had stopped all present were silent. At length the lawyer said, as the evening was far gone, they had better conclude it with prayer, and proposed that the native should pray. He did so; and as he poured out his heart to God the lawyer could not conceal his feelings. Tears started from his eyes, and he sobbed aloud. All present wept, too, and when they had separated, the words, "What will you say, sir?" followed the lawyer home, and did not leave him till they brought him to the Saviour.

HOW TO TREAT INGERSOLL.—The following question having been submitted to a college professor, he replied in the *Albany Journal*, from which we quote :

"*Dear Professor:* Are not Ingersoll's arguments unanswerable? What are you going to do about it?

"SEVERAL STUDENTS."

"So you are out half a dollar apiece, are you? No, no; I cannot answer him. Boys, I recall the incident in my eager and impetuous youth of wasting a pound-and-a-half of bird-shot on a small owl. I followed him from tree to tree, and shot away as much as a hatful of feathers, and when he died of fatigue I found that his body was about as large as a robin's, and I could put it to no earthly use. He was a deceptive target. If I understand the gentleman from Peoria, he wishes to liberate youth from the incubus and thraldom of superstition. That devastating influence of the country clergyman on \$500 per annum and a donation is what worries Robert, and he proposes to cure it and eradicate it for the trifling pittance of \$250 per lecture. For fifty cents, he proposes to liberate your mind from that influence which was filtered into it from the trembling lips of your mother, and free you from the chains of superstition loaded upon your soul by the rough but loving hand of your father. Of course, he worries about you more than those old fogies did—for fifty cents.

"You look around you in the city here and you discover sev-

eral millions of dollars invested in hospitals, seminaries, asylums, forced on the suffering community by this same mythical, miraculous, and superstitious incubus of religion. You ask the gentleman from Peoria where his little public institutions are, founded by his peculiar teachings, and he says in an absent-minded manner, 'Fifty cents at the door.'

"Boys, you see sometimes a poor man's little funeral procession, with a democratic wagon and a little coffin in it so small you could carry it under your arm. A poor couple walk behind it with breaking hearts. Their baby is in the little coffin. It was their all. Their hearts are broken. Oh, if we only had Bob there to tell them about liberty and myths and miracles—for fifty cents—how it would cheer them up.

"But you say 'there are so many infidels.' Boys, you are mistaken. An infidel is an abnormal growth, and Nature feels funny once in a while and creates a freak, *e. g.* : the living skeleton ; the fat woman ; the two-headed girl. So there is about one infidel to a million sane men.

"The most of these noisy fellows are amateur infidels. They talk Ingersoll in fair weather and pray themselves hoarse every time it thunders. A well developed case of cholera morbus will knock their infidelity out of them and leave them in a cold sweat like a china dog in an ice-house. I know them. The most of them are like the boy who runs away from home, and comes back to stay with his father nights.

"Then, again, boys, take a look around you when you invest another fifty cents in liberty, and compare the crowd with the kind of people you find in almost any church. Is it the odor of sanctity you smell ? Hardly, boys, hardly. But you can eat peanuts there, and choke on the shells, while you applaud the funny jokes about the Heaven where you know in your hearts your dear mother is ; or hear the humble Nazarene ridiculed, who, you think, and always will think, gave a home to your weary old father when he left the earth.

"Yes, boys, his arguments are unanswerable, and I think the seasons will come along, and the churches will continue to bloom, and all nature will most exasperatingly and calmly perform her functions, if Robert is not answered. You know when

the first steamer crossed the Atlantic a great philosopher was delivering a most conclusive argument to prove that by no possibility could a steam vessel cross the ocean, and that provoking steamer came snorting and sizzling and splurging right into the harbor. Boys, so will God's foolish children go right on praying and preaching and dying and going to Heaven, in spite of argument."

"IN making the assumption that we may argue upon the absolute uniformity of nature, and suppose those laws to remain exactly as they are, we are assuming something we know nothing about."—*Prof. Clifford's "Conditions of Mental Development," Humboldt Library ed., p. 56.*

KEPLER'S three great laws may be stated as: (1) the orbit of each planet is an ellipse, with the sun placed in one of the foci; (2) the radius *vector* (the line joining the planet and the sun) describes equal areas in equal times; and (3) the squares of periodic times of the planets are proportional to the cubes of their mean distances from the sun.

AN INSTRUCTIVE STORY.—A man came to a dervish and said: "I will lay before you three religious questions to which you will not find easily an answer. The first is—you say God is everywhere, but I see Him nowhere. The second is, you say the power belongs to God and all that is done is done through Him; if so how can man be made responsible for his deeds; which are, in fact, not his but God's deeds? The third is, you say Satan is made of fire and the hell is made of fire. What punishment is it, then, for Satan if he is put into hell, as fire cannot harm fire?" The dervish, without a moment's hesitation, took his heavy pitcher and threw it at the questioner's head. The man uttered his lamenting "*Ya Allah!*" and went before the Kadi with his bleeding head. The dervish was summoned and the judge asked him in reproach whether this was the way a pious man should treat one coming to inquire about religious matters. The dervish replied: "Why, my pitcher was the strict answer to the man's three questions. He doubted God's

existence because he saw Him nowhere. As soon as he felt my pitcher's weight on his head he shouted '*Ya Allah!*' as a proof that he had found out where Allah is. His second doubt was about man's responsibility for his actions. Now, when my pitcher made his head bleed he did not summon God before the Kadi, but he summoned me, and thus he showed conclusively his belief that every man is responsible for his deeds. And in the same way," he said, "I settled nicely his third doubt about Satan and the hell. My pitcher is of clay and he, as a mortal man, is also of clay. If clay can harm clay why should not fire be able to harm fire?" The man forgot his bleeding head on account of the good instruction he had received.

"ABOUT the life and sayings of Jesus there is a stamp of personal originality combined with profundity of insight, which, if we abandon the idle expectation of finding scientific precision where something very different was aimed at, must place the Prophet of Nazareth, even in the estimation of those who have no belief in His inspiration, in the very first rank of the men of sublime genius of whom our species can boast. When this pre-eminent genius is combined with the qualities of probably the greatest moral reformer and martyr to that mission who ever existed upon earth, religion cannot be said to have made a bad choice in pitching on this man as the ideal representative and guide of humanity; nor even now would it be easy, even for an unbeliever, to find a better translation of the rule of virtue from the abstract into the concrete than to endeavor so to live that Christ would approve our life."—*John Stuart Mill, "Three Essays on Religion," pp. 253-255.*

MONTHLY MEETINGS.

BY THE SECRETARY.

The third Monthly Meeting of the Institute in the course for 1886-87, was held at No. 4 Winthrop Place, New York, Thursday evening, December 2d, 1886, with the President, Rev. Dr. Deems, in the chair. The devotional exercises were led by Rev. Henry A. Dowes, Assistant Minister in the Church of the Beloved Disciple, New York.

The minutes of the last meeting were read and approved. It was announced that at the next meeting a paper entitled "What is the Kingdom of God?" would be read by Rev. J. F. Dripps, D.D., of Philadelphia.

The Secretary read the following extract from a letter written by a clergyman well known throughout the country for his ability and usefulness. It is given as a specimen of letters frequently received by the Institute:

"I find it utterly out of the question either to pay my annual dues to keep alive my membership or to subscribe for *CHRISTIAN THOUGHT*. The truth is that my own special work has involved such pecuniary sacrifices that for the last year I have been drawing from the savings bank on my little hoard in order to meet household expenses."

This extract was read [and is now published] in the hope that some fund will be furnished us for continuing the membership of gentlemen whose names honor our roll, but who, like Agassiz, have no time to make money.

The following persons were reported as having become members since the November Meeting: Rev. Wm. Shortt, Walkerton, Canada; Rev. Wm. H. Hubbard, Auburn, N. Y.; Rev. Edward H. Merrell, President Ripon College, Wis.; Rev. James S. Cozby, A.M., Newberry, S. C.; Wilbur P. Thirkield, A.M., S. T. B., Dean of Gammon School of Theology, Atlanta, Ga.; Rev. E. Warren Clark, A.M., Tallahassee, Florida, late professor in Imperial University at Tokio, Japan; Rev. B. C. Borden, M.A., of Sackville, N. B.; Frank S. Hoffman, Professor Mental and Moral Philosophy, Schenectady, N. Y.

The regular paper of the evening was by Prof. George B. Stevens, of Yale College, whose subject was "Reason as a Basis for Theistic Belief."

The paper and subject were discussed by Vice-Chancellor MacCracken and Dr. Deems. On motion of Prof. MacCracken, seconded by Mr. Wm. Harmon Brown, it was

Resolved, That the hearty thanks of the Institute are due and hereby tendered to Prof. Stevens for the able and instructive paper just read before them.

On motion adjourned.

At the regular monthly meeting held January 6th, 1887, the devotional exercises were led by Wm. C. Cattell, D.D., LL.D., ex-President of Lafayette College, Pennsylvania. The minutes of the meeting in December were read and approved. It was announced that at the regular meeting in February, Dr. A. Wilford Hall would explain what is meant by "The Substantial Philosophy."

The President announced that since the last meeting Mr. Cornelius Vanderbilt and Mr. George W. Vanderbilt had each contributed \$100 toward the Endowment Fund.

The following were announced as names of those who had become members of the Institute since the last meeting:

Rev. Henry Fairbanks, Ph.D., St. Johnsbury, Vt.; R. H. Rivers, A.M., D.D., Louisville, Ky.; Thomas T. Wright, Esq., Pensacola, Fla.; Archibald A. E. Taylor, D.D., LL.D., ex-President, University of Wooster, Ohio; John C. Bliss, D.D., New York City; John S. MacIntosh, D.D., LL.D., Philadelphia, Pa.; D. W. Poor, D.D., Philadelphia, Pa.; Rev. Charles Wood, M.A., Philadelphia, Pa.; Archibald McCullagh, D.D., Brooklyn, N. Y.

The regular paper of the evening was by J. F. Dripps, D.D., of Philadelphia, Pa., whose subject was, "What is the Kingdom of God?" The subject and paper were discussed by Rev. Dr. Cattell, Prof. Phœbus W. Lyon, Mr. Muchet, and Hon. A. B. Conger.

OUR LETTER BOOK.

Bishop McTyeire, Nashville :—"I shall continue to rejoice with you at the success of an Institute so pure and quickening and elevating, and making such valuable contributions of morals and science and literature."

Rev. Dr. Brackett, Charleston, S. C. :—"I am delighted to hear that the Institute is steadily growing, and it will give me great pleasure, in any way, to promote the object it has in view."

Bishop Charles Edward Cheney, Chicago :—"I believe that the Institute is doing a very excellent work."

Rev. W. C. Winslow, Boston :—"The April CHRISTIAN THOUGHT will compare favorably with any periodical either

side of the water. Thought and piety, learning and variety, are well blended in the present number."

Mr. William Harmon Brown, the Treasurer of the Institute, has received a letter from a *Canadian clergyman*, from which he kindly furnishes us the following extracts:

"I have during the week been served with notice of my election as a member of the Institute of Philosophy. . . . I have always thought I would like to join either the American or the English Victoria Institute. There is so much atheism, infidelity, and agnosticism now passing current as science and truth, that all Christians should unite to show its falsity, its immoral tendency, and its irremediable end; and how can this be done other than by societies that can collect the money, choose the writers and publish works in popular form and so cheap that all may have them who care to read and judge? Millions of dollars are sent away for missions to the heathen, and it is perfectly right they should; millions are laid out for the benefit of the heathen at home, and this is also right; but if a million were laid out in such publications in bringing the knowledge of Christ and His work, in defending His blessed religion against the nihilism that gives them permission to do as they please, and be as bad as sensuality can make them without any responsibility, and no dread of a judgment to come, would it not be better laid out than it is in some of the many ways of doing good? The Institute ought to be more popular, more widely known, much larger than it is, much better supported, but oh dear! how few there are that think, that care! I hope I shall be able to help the Institute by being a member; and if you and your colleagues can point out some work for me I shall try, please God, to do it."

ABOUT BOOKS.

[In this department we shall make mention of recent publications, especially those in the line of our studies. There will not be space for extended review. The name of the book, its publisher, and its price when known, together with a brief statement of its drift will probably meet the demands of our readers. Any book mentioned will be sent post-paid, on receipt of price, by WILBUR B. KETCHAM, 71 Bible House, New York.]

"A TEXT-BOOK ON SOUND" is the title of a small book by the Rev. Dr. J. I. Swander (New York: Hall & Co.). It contains the tenth chapter of a book entitled "Substantial Philosophy," by A. Wilford Hall, LL.D., and sets forth in catachetical form with ample notes the "substantial" theory of accoustics and is

adapted to the use of schools and colleges. It is an attack on the wave theory of sound, presenting the "substantial" theory which Dr. Hall is known to have been urging for some time.

"THE WILL POWER," by J. Milner Fothergill, M.D. (James Pott & Co., \$1.00) is not a metaphysical inquiry into the nature of the human will, but is a practical book in which an attempt is made to view and review the will in relation to other mental qualities and endowments, and to circumstance, and is intended to furnish an aid to youthful readers in their efforts at self-cultivation.

If any readers wish to read a book almost all muscle and almost no fat, if they wish to see a very absorbing book which has more "ifs" in it than probably any other book of its size published in the last decade, let them read "PROBLEMS IN PHILOSOPHY," by Archibald Alexander, Professor of Philosophy in Columbia College. (Charles Scribner's Sons. \$1.00.)

The French Revolution was an historical event of such immense importance in the last century and probably of such far-reaching extent in the centuries to come that it is not to be wondered at that there shall be from time to time some new historical presentation thereof. The freshest is that by H. Morse Stevens, of Balliol College, Oxford, the first volume of which has been issued by Charles Scribner's Sons (\$2.50). It is not to be supposed because Theirs, Taine, and Michelet in France, and Carlyle in England, have written upon the subject that therefore it is exhausted. Each man writes with the material in hand at his time, and from his point of view. Into the hands of Mr. Stevens have come some very rich materials which he uses with considerable ability. The story has movement and fulness. We shall look for the succeeding volumes with great interest.

The same publishers have brought out in very beautiful style "MESSIANIC PROPHECY," by Prof. Briggs of the Union Theological Seminary, New York (\$2.50), in which is shown the prediction of the fulfilment of redemption through the Messiah. It is described by the author as a critical study of the Messianic passages of the Old Testament in the order of their development. It is a very able and very valuable contribution to biblical literature. Many scholars will take exception to passages here and there in the book, and criticise perhaps severely the order of the development, as the author calls it, of some of these passages. This will be a matter of opinion, but all men who expect to contribute by speech or writing to the glory of the Messiah may derive great benefit from this very scholarly book.

The same publishers issue a beautiful duodecimo volume by the author of that wretchedly-named book, "How to be Happy though Married." The new book, "MANNERS MAKYTH MAN" (\$1.25), consists of thirty chapters of excellent suggestions on manners in the different departments of life. We commend the book as a beautiful present to be made to young people.

Dr. Gustav Gottheil, Rabbi of Temple Emmanuel, New York City, has selected and arranged "HYMNS AND ANTHEMS ADAPTED FOR JEWISH WORSHIP." It is quite refreshing to go over the index of first lines and see how very many of these can be used by both the ante-Calvary and post-Calvary children of Abraham. G. P. Putnam's Sons.

Messrs. Funk & Wagnalls have issued the fourth volume of Dr. Joseph Parker's "PEOPLES' BIBLE," of which we have previously spoken very warmly. This admirable volume keeps up the interest. It is not a minute critical study of the Bible, but it is a series of very brilliant free-hand drawings of the pictures represented in Sacred Scripture. Like everything else from Dr. Parker it is brilliant, but we believe it will outlast many of the other things he has written. The present volume extends from Numbers xxvii.—Deuteronomy. (Price \$1.50.)

Charles Scribner's Sons some time ago gave us some of the most famous of the dialogues of Plato, "The Phaedo," "The Credo," and the "Apology of Socrates," and, later, parts of the "Protogoras" and the "Republic." We are glad to receive another volume from the same translating hand, with the title, "TALKS WITH SOCRATES ABOUT LIFE." It consists of translations from portions of the "Gorgias" and the "Republic," of Plato. It does not need a knowledge of Greek to make this dainty volume thoroughly interesting reading to a person of common intelligence. The English version is so fascinating that we were obliged to read over these old familiar things again. But it never before struck us so forcibly how appropriate these discussions were to the country in which we live at the close of the nineteenth century. Every man who has a son will make that young fellow better by inducing him to read this version of a portion of Plato's great works. We believe the credit of this translation is due to Miss Ellen Mason, of Boston.

Mr. T. Whittaker, Bible House, New York, publishes in a volume entitled "PROBATION, A SYMPOSIUM," papers which appeared in the *Homeiletic Magazine* on the question "Is Salvation Possible after Death?" There are thirteen of these papers written by different hands, amongst the writers being Preben-

dary Stanley Leathes, Principal Cairns, Rev. Stopford Brooke, the R. C. Bishop of Amycla, Rabbi Simeon Singer, and others. The various phases of future probation are discussed from a number of different stand-points. The volume therefore, probably, contains most of the sense and a great deal of the nonsense possible to be written on this subject. (Price \$1.50.)

"THE BOOK OF REVELATION," by Israel P. Warren, D.D., is a 12mo, published by Funk & Wagnalls, New York (\$1.50). This work is the exposition of the concluding book of the Sacred Canon based upon the principles of Prof. Stuart's Commentary, well known to scholars. The design of this volume is to familiarize those principles to nonprofessional readers. The work is done with great skill and judgment.

"STUDIES IN SOCIAL LIFE," by Dr. George C. Lorimer, Chicago & New York, Belford, Clarke & Co. (\$1.00), is a timely contribution to studies in social life, written in the attractive style which marks everything proceeding from Dr. Lorimer's pen. Such questions as Solidarity, Progress, Inequalities, Sufferings, Vices, Impositions, Divisions, Amusements, Education, and Hope, of Society, are discussed. It would help the community to have the Doctor's views carefully pondered.

Mrs. Amelia E. Barr has a growing reputation as a writer of stories. We have read with very great pleasure "THE HALLAM SUCCESSION." It is a tale of Methodist life in two countries charmingly told, leaving with the reader a sense of satisfaction in his mind and a pure taste of sweetness in the mouth of the heart. Phillips & Hunt (\$1.25).

Ginn & Co. publish "THE PHILOSOPHY OF WEALTH," by Prof. John B. Clark, of Smith College, who is also lecturer on Political Economy at Amherst College. Its secondary title is "Economical Principles newly Formulated." While it may be used as a text-book in schools it is also intended for general readers. It is a re-statement of economical principles in conformity, as the author supposes, with the modern spirit. It is evidently written in the interests of the solution of the labor problem.

Messrs. E. P. Dutton & Co. publish in handsome octavo "THE BISHOP PADDOCK LECTURES, 1886," by W. H. Platt, D.D. Dr. Platt is a wonderfully popular lecturer. In print many of the very striking things said when the lectures were delivered in this city have disappeared, but for permanent value the volume has not suffered thereby. These seven lectures are a valuable

contribution to theological and philosophical science. The title is the "Philosophy of the Supernatural."

The Congregational Publishing Society (Boston) has issued a work for which pastors should secure a wide circulation throughout their churches; its title is, "THE BOOK: WHEN AND BY WHOM WRITTEN." The author is S. Leroy Blake, D.D.; the introduction is by Prof. Riddle (\$1.50). It is very important that people who cannot find time for scholarship, and are perpetually hearing assaults upon the genuineness and authenticity of the Bible should be able to have some reasonable account given unto them of whom and by whom the books of the New Testament were written. It is due to them. This need has so frequently been acknowledged by unscholarly men that we are gratified to find a book which we can with a sense of safety put into the hands of an intelligent business friend. Such a book is this. Not intended for scholars, we think it will have the cordial endorsement of scholars.

Fowler & Wells, New York, publish "A NATURAL SYSTEM OF ELOCUTION AND ORATORY," by Thomas A. Hyde and William Hyde. The volume professes to be founded on an analysis of the human constitution, in its threefold nature—mental, physiological and expressional—and is illustrated.

A most dainty little volume is published by James Pott & Co., New York, vellum covers, entitled "CULTURE OF THE CRADLE," by Mrs. Edwina L. Keasbey. It should be in the hands of all mothers who have charge of the little ones who are hereafter to take the places of their parents in the Church of God.

A notice of Dr. Leonard W. Bacon's Sermons on "THE SIMPLICITY THAT IS IN CHRIST" has already appeared in CHRISTIAN THOUGHT. There are three on Natural Theology to which we wish now to call especial attention as being of interest to those who read CHRISTIAN THOUGHT, viz.: his sermons on "Creation," "The Correlation of Evolution," and on "The Natural Theology of the Spleen." We find the last of these three the most interesting. In a very acute manner it discusses the three questions, "Why Suppose that the Spleen has any Use?" "Why Suppose that it is an adequate Use?" and "Why Suppose it has a Beneficial Use?"

The January number for 1887 of *Frank Leslie's Sunday Magazine* contains reprint from CHRISTIAN THOUGHT of the Paper read before the Institute by Rev. James F. Riggs on "American Schools in the Turkish Empire."

"PHILOSOPHICAL REALISM," by William Icriin Gill. Published by W. H. Bradley, Tremont Temple, Boston. Pamphlet.

We call the special attention of our readers to a certain portion of the publications of the American Tract Society, 150 Nassau Street, New York. In addition to tracts and popular religious works there is a department of their books which actually constitutes a very valuable little philosophical library. We have before us twelve bound volumes, twenty-two treatises in paper covers, printed in a series and called "BOOKS FOR THE TIMES," together with a package of leaflets, all of them valuable, and some of such a character that we hope to find space for them on some future pages of CHRISTIAN THOUGHT. Amongst the bound books are works of such members of the Institute as Dr. Jesse B. Thomas ("The Old Bible and the New Science"), Dr. E. F. Burr ("Ecce Coelum," "Pater Mundi," etc.), Dr. Philip Schaff ("The Person of Christ"), and Dr. Herrick Johnson ("Christianity's Challenge"). This series also contains two books which ought to be in every thoughtful Christian's library, Prof. Christlieb's "Modern Doubt" and Dr. Fraser's "Blending Lights." We advise sending to the Society for a list of their publications, in which all these titles will be set forth in greater space than we can give them. We think the bound volumes, pamphlets, and tracts could all be purchased for less than twenty-five dollars and we do not know how a Christian man could do much more good in the way of religious literature than presenting the whole set to some village library. They have recently been added to the library of our Institute and can all be examined at any of its monthly meetings which are held on the first Thursday evening in every month at 4 Winthrop Place, New York.

Wilbur B. Ketcham, 71 Bible House, New York, publishes a little book from the pen of Dr. George Lansing Taylor discussing the question, "WHAT SHALL WE DO WITH THE SUNDAY-SCHOOL AS AN INSTITUTION?" It has already excited comment and we think it will be a wholesome irritant to future discussion. Price, 30 cts.

"INGERSOLL ANSWERED FROM THE BIBLE, AND INGERSOLL AGAINST HIMSELF," by Rev. Olin Marvin Owen. Wilbur B. Ketcham, 71 Bible House, New York. Pamphlet. Price, 50 cts.

CHRISTIAN THOUGHT.

REASON AS A BASIS FOR THEISTIC BELIEF.

[A paper read before the American Institute of Christian Philosophy, December 3d, 1886.]

BY GEORGE B. STEVENS, PH.D., D.D.,

Professor in Yale University.

IN proposing to discuss the relations of reason to the belief in God, it is necessary, first of all, to describe the function and analyze the content of reason and then to show how reason can give birth and support to this belief. This necessity is determining for the form of our present discussion. We proceed then to illustrate :

I. *The Nature and Contents of Reason.*—Reason is the faculty of intuition and reflection. It is more than the perceptive function; it is more than the logical faculty. It is the constitution of the mind's powers to know and think. The truths of reason, therefore, are those which the mind knows with an immediate knowledge. They come into consciousness on condition of reflection and contact with the outer world. They are called forth by experience but are known by the mind as not dependent for their origin and continuance upon experience or association. They are perceived by reflection to underlie and condition all thinking and to enter into the validity of every mental act. Reason is the mind's capacity to know these truths and to co-ordinate them into a consistent system of knowledge. This is the formal definition of reason. The question now arises: What are the truths which are thus known, and how are they to be combined in the unity of a consistent system of thought? We answer :

i. In reason we have a knowledge of *reality*. We know our-

selves as real in all the changes of our life and we know the world as real through the medium of perceptive intuition. Personality is the starting-point in our knowledge of being. This knowledge proceeds from self-knowledge as a centre, according to the sense of the maxim of the father of modern philosophy : *Cogito ergo sum.*

(1) In knowing ourselves as personal we know our power to act. In knowing the action of the outer world upon ourselves we know it in its power to act, which is the condition of its becoming known to us. Being and power are rationally inseparable. Being is an empty concept without the determination of power. "Pure being is pure nothing." As we find in ourselves the principle and experience of power, we are naturally led to construe the knowledge of other being under terms of power. Hence many profound thinkers maintain the spiritual origin of all force, because mind-force is the only force which we directly know.

(2) Another mental principle, regulative of all our thinking and constitutive in all our knowledge of being, is that of cause. We know ourselves as free causes and necessarily believe that no event can occur without a cause. This principle we bring to our interpretation of the outward world. There we perceive action and for it we necessarily assume cause. The application of this principle is not limited to our experience, but is necessarily assumed for all possible events and changes.

(3) The principle of purpose is one of the elements of the interpretive reason of man. Free-will belongs to the very essence of reason and the action of free-will is nothing else than action in view of ends chosen in the light of reason. Willing is final causation. We know ourselves as always acting in view of ends. We therefore know finality as a constituent principle of reason in the light of which we must interpret the universe.

The question now arises : Do we know that all the events in the outer world occur with reference to an intelligent end ? Can we carry the argument over from ourselves to the world and say that because the world of mind is a domain of final causation, the world of matter must also be ? Porter has maintained that

the principle of design is necessarily assumed in all our knowledge of the world and that in its light we must interpret nature and build our science.* Janet takes the opposite position and holds that we have first to prove the *fact* of design in nature ; that we have no proper warrant for assuming it.†

To me the correct position seems to be this : we know design as a mental principle belonging to the very nature of reason, but it is only on condition of experience, induction and reflection that we are able to apply it as a universal principle. It is seen to be a universal and necessary principle only in the process of thought by which we are led to comprehend the universe in the unity of a rational system. The latter view is correct from the stand-point of chronology, or order of time; the former from the stand-point of logic, or order of thought. Whatever confirms and necessitates the assumption of reason as universal and supreme in the universe necessitates the belief in the universality of design. If it shall appear later that we know Reason to be supreme and universal in the universe and that this is a necessary assumption of the mind in every attempt to complete the process of thought regarding the worlds of matter and mind, then design as a principle of universal application will find its justification.

2. Closely connected with our perception in presentative intuition of being and its interpretation by reason, is the fundamental idea of the *true* and the corresponding distinction of the true and the false. The true is that which corresponds to reality. Thus the distinction of the true and the false, the rational and the absurd, has the highest practical importance for the mind as the test of opinions and propositions. The idea of the true is that which corresponds more closely to the merely intellectual side of reason, as the ideas of the right and the good correspond more to its moral side, and stand in closer relation to the will. Reason necessarily believes in itself as endowed with the power to test and distinguish the true and the false. This is its intellectual function and the ground of this distinction is in reason itself. Plato too closely identifies this

* "The Human Intellect," § 608.

† "Final Causes," preliminary chapter—*passim*.

function of reason with its moral function of knowing and approving the right or the good. But to know the truth is by no means equivalent to the approval and performance of the right. The right must be first known as true, but it must also be felt as obligatory.

To the rational test of the true we bring all fundamental questions in philosophy. We characterize them as true or false according as they agree with the norm of reason. It may be asked: Why, then, is it that all rational beings do not agree in their judgments on such questions? If there is an infallible norm of truth for ultimate realities of human knowledge, why do not men agree in their opinions of them? We may reply that, while there are infallible principles, there are fallible interpretations of them. It is often, and erroneously, supposed that because rational ideas and principles are simple and fundamental, they are therefore easily interpreted. But the ultimate truths of reason, so far from lying on the surface of the mind, lie in its very depths. Their very character as fundamental and universal truths, renders their interpretation and application most difficult. Though they are the logical starting-points of knowledge, they are apprehended in consciousness and defined in thought only by the most patient and painstaking reflection. They are simple because they are the deepest facts of intelligence, but they are difficult for the same reason.

The varying and contradictory results, therefore, in the attempts to apply the rational norm of the *true*, by no means discredit the existence of such a norm. It would be as erroneous to maintain this as to discredit conscience because interpretations of conscience are so diverse. It is a testimony to the universal belief in ultimate rational tests of truth that all men seek to bring their opinions into harmony with reason, which is always assumed to be the same in its principles in all men. This is the underlying assumption of all philosophy and science. No systematized knowledge would be possible were this assumption denied. We must hold that what is really true for one rational being is true for all; that reason's norm of truth, could we always correctly apply it, is the same always and everywhere.

Some minds have sought to go behind the standard of reason

itself and raise the question: What guaranty have we that a proposition which reason approves really corresponds to the objective fact of things? We reply that this question seeks a test of reality more fundamental than reason itself, which is absurd. If the verdict of reason were questioned, it could only be questioned by reason, and that reason should discredit itself is a contradiction in terms. That which reason universally sees as true, is true not only for thought but in reality, for universal, rational truth *is* the ultimate reality. The distinction between idea and fact has played a great rôle in modern philosophy. Because we have a certain idea, the objective fact does not follow, it is said. We cannot conclude from the subjective to the objective. I have the idea of a centaur; its objective existence does not follow. We readily admit the position so far as all factitious, arbitrary and unnecessary ideas are concerned. They constitute no argument for the corresponding reality, else the imagination might create reality at its will. Our argument is dealing, not with such ideas, but with constituent, universal principles and tests of reason. The Platonic and mediæval realism assumed the reality of general concepts and thus maintained the correspondence of reason with the objective world. Our position is that reason, as the ultimate reality of the universe, knows its necessary ideas as real and trustworthy. Their authority is reason itself. To ask for any higher authority is irrational and absurd. The truths of reason are supreme in authority and universal in application.

We may here briefly indicate the bearing of the foregoing considerations upon the theistic problems, reserving their completer application to a later stage of our discussion. In reason we know spiritual being directly. We know it as constituted with principles of intelligence, free-will and moral agency. Indirectly, through perceptive intuition and experience, we know a world of order and beauty external to us whose constitution we interpret in the light of the rational principles of cause and design in ourselves. By further reflection we find that a fundamental determination of reason is the distinction of the true from the false, and all experience illustrates this distinction as universal among men. Thought-necessities are our tests of

truth; the rational is the real. At this stage of our argument, therefore, and without supplementing it with other factors, we are prepared to discredit all objections to the effect that we cannot know real being and to maintain that whatever shall appear as a necessary assumption of reason, has every mark of conceivable or desirable evidence as objective fact. These considerations release us from any necessity of framing a formal argument for whatever shall appear as a necessary presupposition of reason. They tend, therefore, to narrow down the question concerning the relation of reason and theistic belief to this inquiry: Is the existence of God a *necessary assumption* of reason? But before approaching this question we have to enlarge the horizon of our argument by considering a third fundamental idea of the reason.

3. As the true is that which is perceived by reason to be real for the intellect, so the *right* is that which is perceived to be obligatory for the will. The right, or the morally good, is that fundamental ethical conception which gives rise to obligation or duty and constitutes the ground for praise or blame in moral action. All persons who have developed reason recognize the distinctions of the right and the wrong, the good and the bad. That various minds perceive the idea of the right with different degrees of clearness; that various ethical theories give it different applications in their systems, forms no objection to the universal character of the principle. It is this fundamental capacity of distinguishing right and wrong which constitutes the possibility of a science of conduct; which makes man amenable to moral law; which forms the ground for civil enactments and sanctions, and which, in large part, constitutes man's capacity for religion.

No fact of reason is more potent in the practical life of man than this. That which reason approves as right, is seen at once to be law for the will. This intuition, therefore, lays a broad, firm ground for ethics. It finds the principles of ethics in the very nature of reason, whose fundamental convictions must be conceived as universal and supreme. No rational being can conceive any state of human society or intelligence where the distinction of right and wrong should wholly disappear. The dis-

appearance of this distinction would be the disappearance of human personality itself. The animal knows no right as such, because in him the essential elements of moral personality are wanting. The existence of moral distinctions in reason as such, and the necessary belief that they are universal, is the basal fact from which may be refuted all theories of ethics which base morality upon feeling, expediency, education or enactments, whether human or divine.*

An important question for theology and ethics here arises: What is the content of this rational intuition of the right? Kant defines this principle as equivalent to the maxim: "So act that the maxims of your action might become the principles of a universal law."† This is the "categorical imperative"—the formal principle of the law. But what is the material principle and how is it known? Kant's system at this point is defective in that he attempted to build ethics upon this formal principle alone. What are we to *do* in order to fulfil this sublime sense of duty which Kant has so eloquently described? We cannot answer this question from the stand-point of Kant's abstract system, but from the stand-point of Christian ethics we can easily do so. Christianity teaches that "*love* is the fulfilling of the law." It is difficult to retire behind the influence of Christian teaching and experience and define the relation of this principle to reason. It is certain that under Christianity the principle of love has been applied to the relations of human life with a fulness unknown apart from its influence. Still we must claim for this material principle of the moral law—*love*—a foundation in reason as such. When man perceives that he is a part of a system, that he stands in relation to other beings like himself, he cannot avoid recognizing that this categorical imperative of conscience should be applied by him in his relations to others. The accompanying obligation to some form of helpfulness is

* Herbert Spencer would render easy his task of establishing his theory of ethics upon long ages of human experience, as against Christian theology, by the following caricature of theological ethics: "Religions, creeds, established and dissenting, all embody the belief that right and wrong are right and wrong simply by divine enactment" ("Data of Ethics," p. 50). On the contrary, theology finds ethics not upon the divine *will*, but upon the divine *reason*, absolute and supreme.

† Abbott's "Kant's Theory of Ethics" [London, 1883], p. 18.

spontaneous. This is the germ of the principle of love, which, indeed, may be choked under human selfishness, but which still exists as a form of obligation intuitively perceived. The stage of development in intelligence, the plane of social life which man reaches will limit or enlarge this sense of obligation. But in its root it is a part of human nature and human reason. The applications which are made of this principle will vary with physical, intellectual and moral conditions. We claim for it, however, a germinal existence in reason, which, in connection with experience in social relations, must ever give evidence of itself in some sense of reciprocity of duties and rights.

If the foregoing considerations are correct, man is a moral being, knowing moral law and feeling moral obligation as universal and supreme. He cannot suppose these moral obligations to originate in himself. Duty is, in its principles, not relative but absolute.

4. We consider next the idea of God as an element of reason's content. It is necessary carefully to guard this point from misconception. It is not meant that the idea of God as defined in Christian theology and cherished in the Christian life is a native possession of reason. This more complete idea is complex and has many roots. Nor is it meant that any idea of God at all must be clearly present in the consciousness of every man. This is not the fact. Since the truths of reason are not upon the surface but in the depths of the mind, only patient thought can discover them. The proposition here maintained is, that, as upon condition of the experience of the relations of space and time, the ideas of space and time arise as necessary ideas in the mind ; so on condition of the use of reason and the discovery of rational principles and laws, the idea of a Supreme and Universal Reason necessarily arises in the mind as the ground of reason in man and the presupposition of all knowledge and thought.

It is not a philosophical theory but a *historic fact* that all men have some idea of a Supreme Being. The form in which this idea arises ; the clearness with which it is apprehended, and the influence which it exerts upon conduct and character depend upon the degree of development which they have attained, and their capacity for apprehending the deeper meaning of this idea.

The so-called "nature-peoples" who do not reflect upon themselves, but feel only certain impressions of the vastness and power of outward nature, commonly conceive of some Power residing in the individual natural objects with which they are familiar. This low stage of the idea of God corresponds to fetishism. A more reflective people will generalize this conception and rise to the notion of the Soul of the world and of a Supreme Power whose activities are distributed through the various departments of nature and human life. We see these stages of religious development exemplified in the religions of Greece and Rome. Only those who are capable of closer self-examination and clearer analyses of thought, will conceive of this Power from the stand-point of reason. This conception is attained in antiquity with more or less clearness by Anaxagoras and Plato. It is here—in reason—that theistic belief has its deepest root. When reason perceives its own ideas, principles and laws, it perceives them to be universal. Reason is therefore compelled to assume as the adequate cause for itself, a Supreme Reason in which it has its origin and ground. The idea of God, therefore, as known in man's reflective reason, is to be defined as the idea that there must be a Supreme and Absolute Reason. This is the form of the idea of God which reason, reflecting upon itself, requires and is compelled to assume. Our position, then, concerning the function and content of reason, requires us to show, not that the being of God can be proved, but that a God of whom we may predicate reason and personality must be assumed.

In application of the principles thus developed, I proceed to the discussion of :

II. *The Knowledge of God in Rational Intuition.*—Our previous analysis precludes the supposition that man has an immediate consciousness of God, because his deepest knowledge comes into consciousness only on condition of profound reflection and in connection with experience. We also acknowledge that the existence of God cannot be demonstrated in the strict sense by the so-called logical "proofs." We cannot by a logical syllogism reach the Infinite from finite premises. We shall seek to show that the existence of God is the logical presupposition

of reason and thought in man. If this be true, it cannot be the object of a proof, since it underlies and conditions all reasoning. Without entering upon a critique of the traditional "arguments," for which we have not time, we freely admit their logical inadequacy. But, notwithstanding this, it is a fact that man as a personal, rational being has a knowledge of God as personal. How is this knowledge to be accounted for? What is its justification and ground? If it be a true and valid knowledge it must have its ground in man's personality and reason as such. The conclusion to which all our preceding considerations point is, that the knowledge of God is given in reflective or rational intuition. That a personal God exists is a first truth—or rather it is *the* first truth of reason—because the most fundamental element of human knowledge, the presupposition of our rational constitution and processes. The universal and constitutive principles and norms of human reason cannot be explained except on the supposition of a Supreme Reason—that is, God, in whom they have their changeless origin and ground. This conviction, when apprehended in its true character, becomes the most fundamental conviction of our mental life and can endure the essential tests of first truths, viz.: necessity, universality and self-evidence. The proposition that Reason is supreme and absolute in the universe cannot be denied without logically denying the grounds of all truth and certainty. Such denial involves, therefore, contradiction and absurdity.

It is granted that theistic belief may be stated in other terms than this, though we think that these are at once the simplest and the most comprehensive. The supremacy of Reason means the existence of a personal God who is absolute in the only sense in which we can know absolute Being. Of a Being metaphysically absolute we can know nothing, for, by the very terms of the definition, such a being exists in no relations and cannot therefore be an object of knowledge. We can only know absolute Being in the sense of Being that is independent and supreme and that therefore exists in no necessary relation. Whether, therefore, we state our theistic conviction as belief in the Absolute or as belief in a personal God, or as belief in a Moral Governor, they are all forms of thought which are in-

cluded in the concept of Supreme Reason. We hope to show that this belief is necessary when we analyze the facts of our own rational being and reflect upon their character.

It is no valid objection to the belief under consideration that many never see it as necessary. When the conditions of its rise in consciousness are not fulfilled, it cannot assert itself in its true force. The view which we have stated unites and harmonizes in their essential elements the various forms of theistic defence which proceed from different classes of facts in man. For example, the view that the belief is a necessary *religious* postulate is in perfect accord with the view (so far as that which is positive in it is concerned) that theistic belief is a necessary postulate of our whole rational being. Our moral nature is not outside of reason since reason is the total organism of the principles and laws of knowledge and thought. In interpreting the demands of reason for the assumption of the divine existence, we may proceed from the moral nature of man—or from the more distinctively religious—a realm in which this demand comes more obviously forward—or from the more intellectual side of his being—that is, from reason in the stricter and narrower sense. We do conduct our argument chiefly from this stand-point.

The larger truth, however, is that God is the necessary assumption of our whole being, without which we are a puzzle, a mystery, a contradiction. He is just as *truly* demanded by the intellect (though not so *obviously*) as by the feelings and the conscience. He is known in reason in the highest sense of knowing as the necessary explanation and ground of reason, harmony, order and law in the worlds of matter and mind. Here lies the deepest truth of the so-called "proofs" of the being of God. In their real value and use they represent various phases of the process of reflection in which our necessary knowledge of God is disclosed. Their true value is thus apparent only when they are combined and seen as each presenting an important element in that knowledge of ourselves in contact with the world, on condition of which we perceive that we must assume the universe to be grounded in Reason. In this view they have a cumulative force. The cosmological and

physico-theological arguments, as proceeding more from our world-consciousness, have the disadvantage of trying to interpret a system of forces and laws which we know but imperfectly from observation and experiment. Their deeper force lies, however, in the conviction of dependence and the intuition of order, law and design which we have as a constitutive principle of reason. They thus interpret and set forth the conviction that, since we are derived existences, organized with principles of rationality which cannot be thought but as universal, we must assume a rational ground of these principles. The moral and ontological arguments, in their deeper significance, proceed from reason itself and explicate the content of our necessary belief that our organization as beings who find ourselves under universal principles of moral law and laws of thought, presupposes a Supreme and Changeless Author of this constitution. At bottom all these forms of proof attempt the same thing: to describe the method in which we reach the rational apprehension of a truth which is logically before all argument and is the postulate of reason itself in man. They proceed from different sides of our rational nature and seek to trace the method of reflection by which, from the given starting-point, we reach the necessary truth of the divine existence. In this function lies their deeper meaning and their imperishable value. For, as has been shown, the necessity of a truth does not mean its spontaneous appearance in consciousness; so far from this, the deeper and more fundamental the truth, the more careful and profound must be the reflection and analysis by which it shall be disclosed to reason in its true character. This is the task of the theistic argument: to rid the mind of misconceptions, to disarm erroneous presuppositions, and, by a thorough analysis of the essential elements of reason and personality, to show that the knowledge which man has of God has its roots in his whole rational nature.

In the same sense in which universality can be predicated of any fundamental truth of reason, it can be affirmed of belief in God. This does not mean that all minds have actually arrived at the conscious acceptance of this belief. Many have never arrived at the clear apprehension of the universal principle of

causality or design, or apprehended the fundamental distinctions in ethics which we consider elementary truths. These truths, like the belief in God—so far as it is a rational belief—come into the clear view of the mind only on condition of careful and profound study of the mind itself. These considerations apply with special force to the idea of the Supreme and Absolute Reason which, *just because it is* the deepest certainty of human knowledge and thought, is the last to be seen as such in the process of reflection. It is a universal truth, therefore, in the sense that it is tacitly, that is, logically—though often unconsciously—assumed in all rational processes; that the capacity for its development is universal in reason and that, as the necessary basis of those universal laws and principles of thought, morality and religion which we have considered, it cannot be denied without being logically assumed. Men of all opinions agree that there is such a thing as *Truth*; that there are corresponding distinctions of true and false, right and wrong, etc. Now, we maintain that whatever truth may be, it must have a *Ground*. We hold that this *Ground* cannot be rationally thought as other than a personal Being. As the ultimate *Ground* of truth, this person is absolute. This view may be expressed in various forms, but they are, in the last analysis, one and the same. We may call this *Ground* of truth—this basal Reality which reason necessarily assumes, a Person, the Supreme Reason or the Absolute. These terms are identical in content in the only sense in which they are legitimately used. The absolute Being is a person and the content of personality is reason. Our knowledge of ourselves as rational and personal and of the principles of our reason as universal, leads us to posit the existence of the Supreme Reason as the *Ground* of our reason and its laws. If a syllogistic form for this argument were sought, it would be something like this: We know ourselves as dependent, derived existences; we possess universal, rational principles; therefore the Cause of our existence must possess rationality and must be the *Ground* of these principles and laws. But a syllogistic expression makes no logical progress because its premises are simply necessities of thought, and the conclusion cannot be of the nature of a demonstration but only the ex-

pression of the conviction which the facts of reason compel. The existence of God is a first truth of reason underlying and conditioning all reasoning and therefore logically prior to it, not a conclusion from it.

In this manner we maintain that the existence of a personal God is a truth *logically* assumed by all intelligent beings, and claim that where reason is not sufficiently developed to apprehend its necessity, it is nevertheless the presupposition of knowledge and thought. Where God is denied as personal, it is because the facts of man's own rational personality are not clearly apprehended and held in view as the starting-point of all philosophical thinking. In harmony with this position we maintain that the existence of God is a logical condition of all science. The physical sciences not only proceed upon the tacit assumption that the universe is pervaded by order, law and design, which they hope more and more to observe and formulate, but they bring to their study of nature the mental principles which are employed in the scientific methods of induction and deduction. The necessary correlate of these assumptions of the scientific method is the existence of a Designer or Intelligent Ground of the universe. When this conviction is obscured by being expressed in such forms as the necessary assumption of some "Inscrutable Power" unknowable to us, or as the "Absolute," it is generally because the true nature of personality is overlooked, and reason is made a function of matter. To this Agnosticism it is to be replied that it violates the principle of causation in that it gives no *adequate* cause for reason in man and no *adequate* ground for the assumptions with which all science must start. This, then, is our conclusion in regard to the universality of our belief in God: that whenever the capacities of reason are unfolded and the processes of knowledge analyzed in their underlying assumptions, they conduct to the conviction of a self-existent and supreme Reason who not only can be known by human reason but who must be known and implicitly recognized as the condition and ground of all other knowledge. To have shown how this assumption is a *logical*, as opposed to an actual necessity for reason as such, is all that our argument requires or permits.

If our process of analysis is correct, a few words will suffice to justify the self-evidence of theistic belief. On this question there can really be but two types of opinion for those who hold that there are any rational grounds at all for belief in a personal God : (1) the view that His existence can be proved by reasoning from some principles more elementary and fundamental than the conviction of His existence, and (2) the view that whatever certainty the belief has, is immediate for the mind. Our whole argumentation has been directed against the former view. Under the latter type there are many varieties of opinion. The elements of our nature which are the starting-point in analyzing the theistic belief, determine largely the sense in which it is defined as immediate. Those who proceed more distinctively from the religious needs and nature of man are wont to consider the conviction of his existence as wrought by an immediate activity of God upon the human spirit. This view easily shades into the mystic conception of the vision of God. Those who proceed distinctively from the phenomena of conscience, the sense of obligation, remorse for wrong-doing, etc., commonly hold that God is immediately known by the mind as the necessary postulate of these moral truths in man. Without depreciating in any degree the important and profound truths contained in these conceptions, we prefer to proceed from the view of man as a knowing and thinking being in our maintenance of the immediate character of our knowledge of God, not because the other forms of thought are not equally important in themselves, but because we are concerned here with confirming and illustrating the specifically rational grounds of theism. Reason in its narrower sense of the power of knowledge and thought is our starting-point and chief concern.

How, then, does it appear that the existence of God is a self-evident truth ? We answer that He is necessarily assumed when the true nature of reason and its principles are rightly apprehended. The belief in God does not rest upon any truth underlying it, since it underlies all truths. There are many truths more obviously self-evident but none more really so. This truth is not attained by reasoning, but is discerned by reason and analysis. It is no valid objection to its self-evidence that it

is reached with difficulty where it is reached at all. The same may be affirmed in greater or less degree of all truths which philosophy holds as fundamental. The fact that it is the most difficult to clearly perceive in its necessary character—because it is the deepest in reason—is in precise harmony with our position that it is the generalization which unites and harmonizes all other truths. It is never to be overlooked that intuitions are never self-evident as requiring no thought to apprehend them. They are developed into the clear view of consciousness only through a process of careful and profound analysis and abstraction. A standard treatise on psychology* distinguishes six steps in this process, the last and most difficult of which is the clear recognition of the implications or "correlates" of these relations of first truths which must be previously apprehended. These are time, space and God. "These are conceived as the conditions of the possibility of the universe, and the ground of its reality, and are therefore the first principles of everything that is or can be known" (p. 508). But the perception of these "correlates" is reached only in the culmination of a process which is "the last attainment of the human mind," and "the number is exceedingly small who can analyze the processes by which they are necessary or see their relations as the ground of all being and of all knowledge" (p. 508).

From another starting-point Ulrici has indicated the belief in God as the first truth of knowledge and thought. This starting-point is cosmological. From the conditioned character (Bedingtheit) of the atoms, he affirms the necessary assumption of an unconditional Ground of their existence. In connection with the law of causality, the mind which contemplates these phenomena of the universe is led to affirm the existence of an absolute Power as the most fundamental conviction of reason.† As the horizon of thought is enlarged and the specific truths of reason and conscience are taken into view, the mind comes into ever clearer apprehension of the theistic conception of the world, and God is seen to be the necessary and self-evident presupposition of ontology, cosmology and ethics.

* Porter, "Human Intellect," pp. 506-508.

† "Gott und die Natur," Ss. 450, 486 Sq. 591 Sq.

We will briefly consider the more important objections to the view that the knowledge of God is intuitive, taking as representative those which are stated in a recent treatise of high merit, Professor Robert Flint's "Theism" (Appendix, note xl.). They are in substance as follows: (1) The idea of God is a complex idea and all intuitions are simple. We answer that an intuition may be so narrowly defined as to exclude the idea of God from the category of intuitions, but if by intuition is meant simply a first truth of reason, a necessary assumption of the mind, it need not be simple in the sense of containing one unresolvable concept. Our intuition of self is not simple in any such sense. We know ourselves in the variety of the states of our self-consciousness and in distinguishable elements of our being, yet our self-knowledge is one and immediate. Our knowledge of God as perceived in reason is simple in the only sense in which simplicity can be predicated of other acknowledged intuitions. It may doubtless be stated in many forms; its contents may be analyzed, but it is a clear and definite concept. We state it thus: We know Supreme Reason as fundamental in the universe. If this knowledge is intuitive, as we claim, it is at once simple and comprehensive. It is an unwarranted limitation of the idea of a first truth that its content cannot be analyzed in thought. Our intuitions of being and of self are capable of such analysis.

(2) "The proof by which the idea of God is reached is, like the idea itself, complex and capable of being analyzed." This we have not only admitted but maintained. The same may be said, as we have shown, of all the most fundamental elements of our knowledge. But this fact has no force against the intuitive character of the knowledge thus attained. The whole force of the considerations advanced regarding first truths is against the objection. It proceeds on the assumption that an intuitive truth is perfectly obvious to every mind, however unaccustomed to reflection or self-observation. It assumes that intuitions are superficial instead of fundamental. We must recognize a difference in the degree of obviousness with which fundamental truths are known. This is often done by making the distinction of the immediate from the philosophical consciousness; or of perceptible from rational intui-

tion. The above objection proceeds as if there were immediate consciousness and perceptive intuition only and no deeper ground of truth perceivable by the mind or condition of the use of its power of reflection and generalization. In this process our deepest truths are reached. They are not derived from this process but discovered in and through it.

(3) God cannot be known in intuition because He is known in nature and Scripture. We reply that so far as God is known through nature, it is only as nature is interpreted in the light of rational principles which are seen to demand His existence. This *a posteriori* knowledge is only an aid to the more fundamental *a priori* knowledge. That He is known through revelation can be no objection to the view that He is known in reason. St. Paul distinctly teaches that the heathen had a knowledge of God apart from revelation through their rational interpretation of the universe (Rom. i., 19, 20). Our intuition of an object does not mean that we know by reason alone all that can ever be known of it. Revelation may extend the knowledge of God which reason is competent to attain. The Scriptures everywhere assume a knowledge of God as native to man.

(4) The various forms in which men have conceived of the Deity preclude the view that He is intuitively known. This objection we have anticipated. We need only add that the universality of some idea of God does show the operation of a constitutional tendency in man to develop this idea. But that the most profound truths of reason, whose apprehension is the necessary condition of developing the idea of God in its true character, are not apprehended by unreflecting and depraved peoples, need not surprise us or cause us to doubt the capacity of reason to develop this idea, or to deny that it is potentially present and presupposed in all minds.

Thus have we examined the content of man's reason and found it to include, as its most fundamental element, the necessary assumption of Reason as the Ground of the universe—the seat of universal rational principles as man knows them—in other words, that a personal God must be presupposed. Our argument is not an attempt to prove that God is, but an effort to show that *He must be assumed*. The themes which we have

sought to treat are too high and too difficult to permit any over-confidence of opinion. For years the conviction has been deepening in the mind of the writer that we have not only a religious but a rational knowledge of God; that He is a necessary postulate not only of the "moral reason" but of the "speculative." To triumphantly defend this position is one of the noblest aims, as it is one of the severest tasks, of philosophical thought.

THE FUNCTION OF CHRISTIAN DOCTRINE.

[A Lecture delivered before the Summer School of Philosophy, August 24th, 1886.]

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ALL science, all classified knowledge has its first principles ; its beginnings, which are set in its foundation, upon which the whole structure rests ; its skeleton frame-work which gives it form and symmetry ; which holds it together. These first principles have to be stated didactically, or in a form suitable to be taught by a teacher ; to be received by a pupil. Sir William Hamilton defines science to be "a complement of cognitions, having in point of form logical perfection; and in point of matter the character of real truth." There is no science which does not take on a logical form ; that is, which cannot be commended to the human reason ; to man in the exercise of pure and formal thinking. Nor is there any science, unless that which it embodies, as its subject-matter, be the truth. Science, then, is truth logically set forth addressed first to the intellect.

The works of Herbert Spencer are books of doctrine ; that is, of science stated abstractly. And they are scientific just in proportion as the statements are logical, and the subject-matter is the truth. The first principles of any science are derived by the process of abstraction. They are abstract generalizations. The abstract presentation of truth is not popular, but it is the only scientific presentation. The people like to hear truth taught by illustration and not didactically ; but truth taught

didactically is the only exact truth. Take the leaf of the maple and consider its form or its color in spring-time or autumn; dentated, green, golden. Here is a law of configuration, a law of tint according to the season of the year, which holds true of all such trees. This law we find by a process of abstraction. Take the moral nature of man. Here is a tendency to evil in Adam, who breaks away from God; in all his posterity, who follow hard after him, in the apostasy. It is in Cain, who kills his brother Abel; it is in Jacob, who deceives his old father Isaac, and defrauds his brother Esau; it is in Moses, who though he has led a great people to the brink of the promised land cannot enter it; it is in Elijah even, who is translated so that he shall not see death, for whom the great King sends his horseman and chariot to take him to glory; and, yet, who is just as much of a coward in the presence of Jezebel, after he has slain her prophets, as he was a prince with God upon Mount Carmel; a man of like passions as the rest of humanity. Goethe says: "At all times it is the individual that preaches the truth, not the age. It was the age that gave Socrates the hemlock for his supper; the age that burnt Huss. The age is always the same." So that in the apostasy, Elijah, and Moses, and Jacob represent not the age but the individual; far above the age; the age in its mountain-peaks! The age-spirit is always apostate.

Abstract this one quality, or attribute of the race, and what have we? Sinfulness instead of sin; a scientific statement which is applicable to the whole human family. For the concrete has been substituted a principle, which covers every instance of the concrete. David says: "Against Thee, Thee only have I sinned, and done this evil in Thy sight." Judas says: "I have sinned, in that I have betrayed the innocent blood." St. Paul says: "There is no difference, for all have sinned and come short of the glory of God." David and Judas make statements that are concrete; St. Paul, a statement which is abstract; which is doctrine; which is didactic; a statement derived from a knowledge of all the facts in the case as God knows them; a first principle! The statement of Herbert Spencer that the self-existence of the Creator is a thing "rigorously inconceivable," is no less a doctrine than the counter challenge of the living God:

“I am that I am!” The statement that “the Power which the universe manifests to us is utterly inscrutable,” is no less a doctrine than this statement of Him without whom was not anything made that was made: “He that hath seen Me hath seen the Father; how sayest thou, then, Show us the Father?” So that you can have no science without first principles; you can have no first principles without abstract statements addressed primarily to the logical faculty; having “in point of form logical perfection.”

The commonplace and flippant charge that the abstract, the didactic statement of Christian doctrines is dull and uninteresting, and therefore should never be adopted, ought to be weighed in connection with the apology for the same qualities in Herbert Spencer’s “Synthetic Philosophy.” This work embraces discussions in biology, physiology, sociology, from “which to derive correct rules of human action, and the true theory of right living;” the very object of the Christian religion; though from another stand-point. This is the apology: “As the present volume is a working out of universal first principles, it is of an abstract character. The discussions strike down to the profoundest basis of human thought, and involve the deepest questions upon which the intellect of man has entered. Those unaccustomed to close metaphysical reasoning, may, therefore, find parts of the argument not easy to follow. But all who have sufficient earnestness of nature to take interest in these transcendent questions, will find them considered with unsurpassed clearness, originality and power. The invigorating influence of philosophical studies on the mind, and their consequent educational value have been long recognized.” But what discussions strike deeper, demand closer metaphysical reasoning, greater seriousness and earnestness of nature than those which have to do with Christian doctrine? And if Herbert Spencer, when he speaks of “Genesis and Heredity,” of “The Shape of Plants and Leaves and Animals,” of “Society and the Family,” of “The Principles of Ethics,” needs to caution the student against impatience with the statement of truth in didactic forms, how much more out of character is impatience at doctrinal statements in religion!

The Epistle to the Romans is full of the first principles of Christianity addressed to the pure intellect; to the logical faculty. It contains the philosophy of the Christian system. It contains the *novum organon* of Christianity. Before St. Paul, Christianity was like plant-life before Linnæus. It had great unclassified facts. "For the Jews require a sign, and the Greeks seek after wisdom." And here comes this great Apostle to the Gentiles, not working miracles to convince the Jews, but putting a philosophical construction upon the facts of the case; giving Christianity, in "point of form, logical perfection," as "in point of matter" his divine Master had given it "the character of real truth." Why not? Why shall every other department of God's works have a science, and this highest department of all be without? "The hawk flies by God's wisdom, and stretches her wings toward the south. The eagle mounts at His command, and makes her nest on high. She dwelleth and abideth on the rock, upon the crag of the rock and the strong place. From thence she seeketh the prey, and her eyes behold afar off. Her young ones also suck up blood; and where the slain are, there is she." There is philosophy in these movements of birds of prey. The naturalist finds law here; first principles, science. And that reminds us of the claim that is set up for wisdom in the Book of Proverbs: "The Lord possessed me in the beginning of His way, before His works of old; I was set up from everlasting, from the beginning, or ever the earth was. Before the mountains were settled, before the hills was I brought forth; while as yet He had not made the earth, nor the fields, nor the highest part of the dust of the world." And so on through that whole sublime passage, which, lest we may forget that man is concerned in it, and that wisdom is the God-man personified, closes with the language: "Rejoicing in the habitable part of the earth; and my delights were with the sons of men;" implying that there is the same opportunity for scientific research, for classified knowledge in this highest of all God's economies as in those lower ones.

It is said, indeed, that these truths of revelation are so transcendent, are so ineffable, that accurate conception and accurate formulation of them in the language of man, are impos-

sible. This objection, of course, would bear against any attempt on the part of our Heavenly Father to become our teacher and to disciple us; to give us didactic truth in the form of language. Inadequate as is human language to portray the love of God, the Son of God attempted it, when He said: "For God so loved the world that He gave His only begotten Son, that whosoever believeth on Him should not perish, but have everlasting life." There is scarcely a word there, which is not transcendent, which is not ineffable. And when the great Apostle to the Gentiles takes up the theme, he rises to apostrophe; his philosophy, his severe logic melts into love, as the ice of the Alps melts into bloom on the edge of the glacier: "O the depths of the riches both of the wisdom and knowledge of God; how unsearchable are His judgments, and His ways past finding out. For who hath known the mind of the Lord, or who hath been His counsellor? Or who hath first given to Him, and it shall be recompensed to him again? For of Him, and through Him, and to Him are all things. To whom be glory forever. Amen." Here logic is lost in adoration and praise; and the great metaphysician and philosopher assumes the attitude of the seraphim in the vision of Isaiah, when the Lord's train filled the temple, covering their faces with their wings, and crying one to another: "Holy, holy, holy is the Lord of hosts; the whole earth is full of His glory!"

In one sense, all science is transcendent and ineffable. If it were not, there would be no charm in its pursuit. When we have uttered all we can learn, we have only begun. The higher we climb, the wider the horizon. But it is the attempt to know, and to utter in language, which projects us into the sphere of the transcendent and the ineffable; brings us under the power of the transcendent and ineffable. Take the art of speech itself, as an illustration. Is it any argument against elocution as a science, with fundamental principles, with abstract rules, when the living speaker, full of his theme, kindled in his emotions, so loses himself in his subject and in the occasion, as to go beyond man's ordinary horizon, in what are called flights of eloquence; in pictures and fancies and intuitions, of beauty unspeakable, that seem to defy all classification and analysis? Shakespeare,

doubtless, conceived of his art as transcendent and ineffable. But who that analyzes Hamlet's direction to the players : " Suit the action to the word, the word to the action, with this special observance, that you o'erstep not the modesty of nature," can doubt that the dramatic art with him was founded upon great first principles? Besides, the transcendent and ineffable, in Christian doctrine, relate especially to those fundamental things about which Christendom has always been a unit : such things as are embraced in the Apostles' Creed.

Says the Duke of Argyle, in his "Unity of Nature :" " Man's sense of ignorance is one of the greatest of his gifts; for it is the secret of his wish to know. The whole structure and the whole furniture of his mind are adapted to this condition. The highest law of his being is to advance in wisdom and knowledge; and his sense of the presence and the power of things which he can only partially understand, is an abiding witness of this law, and an abiding incentive to its fulfilment." And yet it is not absolute knowledge of truth, alone, after which we aim. It is confronting ourselves with the infinite in search of the truth, in trying to formulate it. It is measuring our finiteness with God's infiniteness. The statement of truth in the concrete never makes this impression; only the statement of truth in the abstract. It is only the statement of truth in the abstract, that isolates us from material surroundings; as a single cloud is isolated in the expanse of heaven; floating in mid-air. So that the very fact that a statement relates to truth which is transcendent and ineffable is an argument in its favor; I mean, for the uses of Christian doctrine. When we are under the power of such abstract truth, we are lifted above material things; as Vinet expresses it, " We feel that our true and fundamental relation is with the infinite; that the roots of our being are imbedded there, and that thence our existence derives its meaning. Then we feel that God is the idea of ideas, the truth of truths; that He not only envelops our whole existence, but penetrates its inmost recesses; that the thought of Him claims like Himself the right of omnipresence, and ought to be mingled with all the elements and all the successive movements in our life—that life, to answer its end, ought not only once for all, but

during each instant, to receive God entire; that He should determine and regulate every pulsation; in a word, that the loftiest of all ideas is, also, the closest to us; that the sublime and the necessary are one; and that God is the life of the soul."

The great Teacher gives us the germs of doctrinal truth: the germs of a true Christian philosophy. He leaves His teachings, just as He leaves what He has done in nature—His teachings there; hiding in them the infinite wisdom; the wisdom of God: lodging in them anticipations and previsions, to be fulfilled, to be unfolded, according to the laws of the human mind. When He says, "I am the Good Shepherd; the Good Shepherd giveth His life for the sheep," here in the germ is the vicarious atonement; is the doctrine of justification by faith; is the doctrine of participation in the life of God. This is the *pou sto*, where the Apostle stands, as he undertakes to move the world; as he moves the world, and shifts it back into its proper orbit, wheeling obediently around the throne of God. For, "we thus judge, that if One died for all, then were all dead; and that He died for all, that they which live should not henceforth live unto themselves, but unto Him, who died for them, and rose again." A great many people, in these days, speak of the Apostle Paul as left to his own preconceptions and idiosyncrasies, in the unfolding which he gives to the Christian system: in the transformation which it is claimed that he wrought upon the real teachings of the Lord Jesus Christ. And they go learnedly through the Apostle's writings, and say, "This is Pauline!" "That is Pauline!" What does he say himself? "But, I certify you, brethren, that the Gospel which was preached of me, is not after man; for I neither received it of man, neither was I taught it, but by the revelation of Jesus Christ." "Which things also we speak, not in the words which man's wisdom teacheth, but which the Holy Ghost teacheth." "Where is the wise? Where is the scribe? Where is the disputer of this world? Hath not God made foolish the wisdom of this world?" Think of the Apostle Paul, undertaking to foist a Pauline philosophy, a wisdom of his own, a philosophy of man into the Christian system; bringing upon his own head the very *anathema maranatha* which he pronounced upon another; coloring the clear

waters of the River of Life, which proceed from the throne of God and the Lamb, with the mud of his own human thinking, making the sediment of the Pauline float down the ages! Doubtless the peculiarity of his mental temperament, constitution, training, was a part of God's purpose in selecting him. God chose a man of his many-sidedness, to give the Gospel, as he presented it, many sides; but not to make it Pauline, as against the Gospel as Christ presented it; but Pauline only in the sense that the *novum organon* is Baconian. If personal idiosyncrasy, or mental structure has prevailed over inspiration, it was, at least, contrary to the Apostle's consciousness; if we may confide in his own declarations. "Who, then, is Paul?" The Pauline idea! no one despises it more than Paul himself.

The argument for the inspiration of Christ's immediate disciples is, that though speaking for all time, He showed no concern to have His words recorded as He uttered them; all the while meaning that the Holy Spirit should bring all things spoken to their remembrance; that the fragments should be gathered up and nothing should be lost. There are no abstractions in nature, there is no attempt to classify and keep separate the various distinct economies of the Creator. The violet for the botanist grows beneath the shadow of the rock for the mineralogist. It is much so with the speech of the great Teacher, who derives so many analogies from the material world; or, rather, who has set in the material world so many germs of truth divine. He never opens His mouth but some sublime, some infinite truth is hidden in His utterance. Just as a single tree shakes from its full branches a forest of oaks, indifferent what may be their fate, so this Tree of Life, whose leaves are for the healing of the nations, towers heavenward, bearing its twelve manner of fruits, and yielding its fruit every month.

So much has been said during the last generation against what is called doctrinal preaching—although, perhaps, no generation in the Christian era has had so little of it, or needs it so much—that we have come to forget that the intellect is the medium through which all truth is received. Doctrinal preaching is only the putting of truth into its teaching form: its function being to make intelligent, well-informed Christians; no less than

to bring men under the power of a great system of truth. Practical preaching, as distinguished from doctrinal preaching, is the urging of duties derived from the admission of the truth, presented in the doctrinal or the teaching form. There can be no practical preaching without implying doctrinal preaching. Intelligence is a preliminary to belief. Belief is a preliminary to Christian morality. Says Coleridge: "In our present state, it is little less than impossible, that the affections should be kept constant to an object which does not employ the understanding, and yet cannot be made manifest to the senses. The exercise of the reasoning and reflecting powers; increasing insight and enlarging views are requisite to keep alive the substantial faith in the heart." Again, "It is worthy of especial observation, that the Scriptures are distinguished from all other writings pretending to inspiration, by the strong and frequent recommendations of knowledge, and a spirit of inquiry." After showing the insufficiency of mere intellectual knowledge; the vanity and emptiness of philosophical speculation alone, Alexander Vinet goes on to add: "But, I think I hear some one say, Is it really nothing to know? Is not knowing, the way to the truth? Is it not a part of the truth? Doubtless, it is. And were this the proper occasion, I should insist on the utility of that very knowledge, the insufficiency of which I have just exhibited; and for this very reason that religion ought to be seized by the whole man. I should demand that the intellect should enter into it; and considering the beautiful harmony of the evangelical system, its perfect consistency, founded upon absolute, and by consequence, necessary truth; the accordance of that work of God with all the other works of the same hand; I would say, that if we wish to place man at the point of departure of all just ideas; on the way of all practical truths, it is good to make him embrace the Christian religion on the sides which interest his reason; a thing, perhaps, too much neglected, and which would form, for the mass of society, an instrument of mental development, not less than of moral culture."

Many of you remember the picture which Horace Bushnell gives in his address on "The Age of Homespun," of the old-style New England congregation. "There is no affectation of serious-

ness in the assembly, no mannerism of worship; some would say, too little of the manner of worship. They think of nothing, in fact, save what meets their intelligence, and enters into them by that method. They appear like men who have a digestion for strong meat, and have no conception that trifles more delicate can be of any account to feed the system. Nothing is dull that has the matter in it; nothing long that has not exhausted the matter. Under their hard, and as some would say stolid faces, great thoughts are brewing. Free-will, fixed fate, fore-knowledge absolute, trinity, redemption, special grace, eternity; give them anything high enough, and the tough muscle of their inward man will be climbing steadily into it; and if they go away having something to think of, they have had a good day. A perceptible glow will kindle in their hard faces only when some one of the chief apostles—a Day, or a Smith, or a Bellamy—has come to lead them up some higher pinnacle of thought, or pile upon their sturdy minds some heavier weight of argument. True, there was a rigor in their piety, a want of gentle feeling; their Christian graces wore cast-iron shapes, answering with a hard, metallic ring. But they stood the rough wear of life none the less durably for the excessive hardness of their temperament; kept their families and communities none the less truly, though it may be, the less benignly, under the sense of God and religion. If we find something to modify or soften in their over-rigid notions of Christian living, it is yet something to know that what we are, they have made us, and that when we have done better for the age to come after us, we shall have a more certain right to blame their austerities. View them as we may, there is and always will be, something magnificent in their stern, practical fidelity to their principles."

In his "Rationalism" Lecky says that, "Originally, Christianity was strictly a religion; that is to say, it consisted of modes of emotion, and not of intellectual propositions." What is emotion? It is the moving of the mind or soul. What moves the mind or soul? "Modes of emotion!" What does the Apostle of love say of the philosophy of love? "We love Him because He first loved us." The very word *because* implies something addressed to the reason. Religion, as distinguished from the-

ology is something subjective. But how is that something subjective produced? How is the obligation formed? First, the intellect perceives; then the conscience urges its law; then the emotions are kindled. "Come now, let us reason together, saith the Lord." The idea is that of disputation and argument, in order to persuasion. The Atonement is the expression and embodiment of the Divine Reason; the infinite logic of infinite love! The Cross is the Father's last argument. And when the Lord Jesus Christ, the Son of God, becomes incarnate; though God the Father, whom He comes to reveal, is defined to be love, He is not personified as love; but as the *logos*, the wisdom, the reason; implying that intelligence, the understanding, lies at the basis of all recognition of God; reconciliation with God. Says Coleridge, "A reason there must be, in order to a rational belief. It must be the practical reason of man, comprehending the will, the conscience, the moral being, with its inseparable interests and affections; that reason which is the organ of wisdom, and as far as man is concerned, the sense of living and actual truths." He does not mean by this, the abstract, or speculative reason alone; but this abstract or speculative reason is involved in the phrase, the organ of wisdom. It is the eye of that organ.

The theology of this period wants to substitute for old-time doctrinal statements, which are Deo-centric, statements which it designates as Christo-centric; making the Son and not the Father, the keystone of the arch. The Fatherhood of God is to be interpreted by human fatherhood; the attributes of God by human instincts. And yet, the only human father who has given us the key to God's fatherhood as seen in the Atonement, performs an act, the ethico-religious character of which makes every tender instinct of human nature revolt. God's ways are not our ways; nor His thoughts our thoughts. The fatherhood of Abraham lifting up the knife to slay his son, and not the fatherhood of Eli, "Not so, not so, my sons!" is the type of God's fatherhood. The mystery of the Cross is not to be interpreted from the side of the Cross; is not to be interpreted from the nature of human fatherhood. In a very able discussion of this subject by one of the acutest minds of this country,* occurs

* Dr. J. H. McIlvaine, in "The Wisdom of Scripture."

the following: "It may be conceded that logically the doctrine of decrees is the true centre upon which all the others depend; but here, as in so many other instances of systematized religious thought, the logical and spiritual centres do not correspond." It certainly must be conceded that in the Saviour's utterances, the utterances of the Divine Logos, the Divine Wisdom, the logical and spiritual centres must correspond. Take the following: "God so loved the world, that He gave His only-begotten Son, that whosoever believeth in Him should not perish, but have everlasting life." He would be a very revolutionary thinker who should claim that this statement had not the proper spiritual centre. But it evidently centres in the throne of God. It is the movement of the heart of God toward this lost world that is here described. From this heart of God proceeds the gift, the human acceptance of which results in life everlasting. "When ye have lifted up the Son of Man, then shall ye know that I am He, and that I do nothing of Myself." "And this is the will of Him that sent Me, that every one that seeth the Son and believeth on Him, may have everlasting life." The Saviour always refers to the Father as the origin of all His words and works. He is here in this world to do the Father's will; to speak the Father's words; to fulfill the Father's purpose; to reveal the Father! Spiritually, at least, the Saviour's theology must be Deo-centric. It is so historically; for He claims to be the seed of Abraham and the fulfilment of the Father's promise to the patriarch. It is true that the teaching of the Saviour is all of a soteriological character: that all that He reveals respecting God, man, sin, mercy, things present, things to come, Himself, stands in direct relation to salvation as an end. But spiritually it proceeds from the Father, and ends in the Father, being consummated, as the Apostle described: "And when all things shall be subdued unto Him, then shall the Son also Himself be subject unto Him that put all things under Him; that God may be all in all!"

These utterances of the Saviour are in exact harmony with those of the great logician of the New Testament. "God commendeth His love to us, in that while we were yet sinners, Christ died for us." "Whom God hath set forth to be a propitiation

through faith in His blood; to declare His righteousness for the remission of sins that are past, through the forbearance of God." "All things are of God, who hath reconciled us to Himself by Jesus Christ, and hath given to us the ministry of reconciliation: to wit, that God was in Christ, reconciling the world unto Himself, not imputing their trespasses unto them." "He that spared not His own Son, but delivered Him up for us all, how shall He not with Him, freely give us all things?" If they are spiritually true and historically true, thus tested, we see also they are also logically true. The systematic forms and formulas into which the Apostle Paul threw the truths taught by the Saviour, are inspired by the same Being who met him on the road to Damascus, and who as really selected him for his work as a logician, as for his work as the Apostle to the Gentiles; nay, who doubtless saw that as a logician alone, as a man with a system, could he successfully encounter the Greeks that sought after wisdom.

If the human mind is one, if the system of Christian truth is one, there can be no difference between the spiritual and logical centres of Christian thought. Certainly, there is none in the mind of God. With Him, what is spiritually true is logically true; and what is logically true is spiritually true. The light-rays and the heat-rays are one in the light. The intuitive process by which the Apostle John discovered that he had passed from death to life, agreed with the logical process by which he derived the duty of loving the brethren. "We know that we have passed from death unto life, because we love the brethren." This is a spiritual process; an intuition. "Every one that loveth Him that begat, loveth Him also that is begotten of Him." This is a logical process; an inference. Like the two radii of a circle they meet in the same centre. They must meet there! It is very true that every believer has to experience for himself the truth of the truths of religion. First, he knows them from the testimony of others logically; then, he knows them by finding them out spiritually; by recognizing them within. "Now, we believe, not because of thy saying"—the logical process—"for we have heard Him ourselves, and know that this is indeed the Christ, the Saviour of the world." "It is the Christian alone," says Vinet, "who sees the justice, goodness and providence of

God manifest themselves in all their fulness, and develop in perfect harmony. In Jesus Christ they are complete, real, triumphant. In Him divine justice has been satisfied; by Him the goodness of God proclaimed; through Him the government of the Holy Spirit, moral providence, have been raised above doubt. These truths are all the substance and all the object of the Bible. The Christian alone knows God; alone has a God." And yet, logically, a man not a Christian may know, may have the same God with the Christian. "For the invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made; even His eternal power and Godhead." The Apostle there refers to the logical process. "He left not Himself without witness, in that He did good, and gave us rain from Heaven, and fruitful seasons; filling our hearts with food and gladness." "The heavens declare the glory of God; and the firmament sheweth His handiwork. Day unto day utterereth speech, and night unto night sheweth knowledge. There is no speech, nor language where their voice is not heard." All this argument is addressed to the logical faculty. Nature is the great Teacher of the intellect. God may be this man's inference; as the Messiah was at first the inference of those who heard the woman of Samaria. But there is a spiritual way of knowing God, by which a man reaches the same centre. Then, he not only knows Him, but has Him and knows Him, because he has Him! "When ye shall have lifted up the Son of Man ye shall know that I am He." Here was to be a spiritual process. The process by miracles was logical, by repentance spiritual. "This is life eternal, that they might know Thee, the only true God; and Jesus Christ, whom Thou has sent." "Have I been so long time with you, and yet, hast thou not known Me? He that hath seen Me hath seen the Father."

The science of theology never made a Christian in the world, any more than natural science, which is natural theology. Science puffeth up, charity buildeth up. But the truths of Christianity are susceptible of logical statement, and only their logical statement can make them symmetrical; and the logical reception of them can alone keep us from distorting them; from holding and preaching them out of proportion to each other;

which is just as much error as the most open heresy. Christian doctrine has to do with all parts of man's nature. Received in its symmetry, it makes a symmetrical man. It is addressed first to the reason, just as the material world is addressed to the organs of sight. Unless a man knows what he is taught, he is taught nothing at all; unless what he is taught conforms to his reason, he rejects it. It is an instinct to do so. Not that the reason has any sovereignty over the realm of Christian doctrine; not that there are not realms of truth over which God has not made man a ruler and a divider. There are secret things which belong to God. There are realms of truth so high, so rare, that the human reason pants there for breath; just as there are realms in space, where even the eagle must stay his flight. But so far as the reason can fly, it finds things reasonable. If there is a more sublimated atmosphere than it can breathe, it is for the Infinite Reason. And what we know not now, we shall know hereafter; if we can bear it, if it is best for us. Martensen says in his "Christian Dogmatics," "that a mind regenerated by Christianity must be able to reproduce the doctrines of the Bible in a scientific form; that the witness of the spirit is in part a testimony borne by the Spirit of God as the spirit of truth, through the medium of the thoughts and cognitions of men." This is only another way of saying that in regenerated humanity, and as one result of generation, the spiritual and logical centres of truth are the same. The Holy Spirit witnesses to the truth as a science, as well as an experience. But that which regenerated humanity, that is, the new man in Christ Jesus, can reproduce in scientific form, because he has experienced it, unregenerated humanity, the natural man, has first to receive through the intellect. Take the preaching of the Apostle Peter on the day of Pentecost. It is doctrinal. It has the offensive doctrines in it. They are there like Jacob and Esau, in the womb of his discourse. He leaves them there contending for the mastery, Calvin and Arminius taking up their quarrel before their time. It has these "two great and co-ordinate truths, each of which rests on its own evidence, and neither of which should be made to limit the other; while the secret of their perfect harmony is known only to God:—" * "Him being delivered by the determi-

* Dr. J. H. McIlvaine in "The Wisdom of Scripture."

nate counsel and foreknowledge of God, ye have taken, and by wicked hands, have crucified and slain." It was nothing new. It was just what the Saviour had taught. "And no man laid hands on Him; for His hour had not yet come." What hour? The ninth hour, when He cried with a loud voice, "My God, My God, why hast thou forsaken Me?" "I have power to lay down my life, and I have power to take it again." Between these "two great and co-ordinate truths," as the two poles of His being; truths whose perfect harmony in Him was known to the Father, when He said over and over again: "This is My beloved Son, in whom I am well pleased," the orb of His being revolved; the Saviour finished the work which the Father gave Him to do. He said to the Jews: "Ye seek to kill Me, a Man that hath told you the truth, which I have heard of God." He said to Pilate: "Thou couldst have no power at all against Me, except it were given thee from above. Therefore, he that delivereth Me unto thee hath the greater sin." He said to the disciples: "I have a baptism to be baptized with, and how am I straitened, till it be accomplished." He said to the Father: "I have finished the work, which Thou gavest Me to do. And now I come to Thee."

Christian doctrine has to do with all parts of a man's nature. It is for the intellect, the conscience, the affections, the will. The light is for all parts of the flower—the stalk, the leaf, the root, as well as for the blossom that it tints as with the touch of an artist. This Pauline theology, what wrought it in St. Paul himself? these dogmatic conceptions, this logical and methodical way of looking at Christian truth? If I were asked which of the Apostles most thoroughly apprehended Christianity in his sensibilities, in his affections, I should answer, not St. John, womanly and tender as was his life, leaning on the Master's bosom, as he did. I should answer St. Paul. Adolph Monod has a sermon on this characteristic of the Apostle, founded on the text: "Remember that by the space of three years, I ceased not to warn every one night and day with tears;" and taken from the chapter in Acts, which closes: "And they all wept sore, and fell on Paul's neck and kissed him." The representation that is made of theologians, as such, is that they are

as dry as a stick ; that the abstract discussion of truth is wholly inconsistent with those amenities of sentiment and feeling which attach to the discourse of men whose nature it is to rebel against logical forms. Here we see the grandest of all human thinkers, the acutest of all metaphysicians, the most practical of all missionary laborers, doing the hardest and most wonderful intellectual work that ever man did, and doing it all with the tearful tenderness of a woman ; nay, better, of a man made Christlike at the foot of the Cross ; loving with the same kind of love as that which led his Master to die for sinners—as that which led the Father to make the unspeakable gift. There were tears in his doctrine, in his faith, in his zeal, in his activity, in his consecration, in his patience, in his vigilance, in his charity. He is the only Apostle who ever undertook an analysis of charity, of that love which God is ; of that love which the love of the Father awakens in the human soul ; which beareth all things, believeth all things, hopeth all things. With him there was no warfare between the Christian graces. The tongues of men and angels, the gift of prophecy, to understand all mysteries and all knowledge ; to remove mountains, to bestow his goods to feed the poor, to give his body to be burned ; these were his, as never before and never since have they belonged to man. And yet, this author of the Pauline theology, who, with his logical lever is charged with shifting from their sockets the poles of Christian truth ; with giving Christianity a rigid Roman toga rather than the light flowing Grecian mantle ; does not hesitate to claim for himself that he was weak with every other man who was weak, and burned with every man who was offended ; and that when he came to glory, it was in his infirmities.

Athanase Coquerel, the younger, in his "First Historical Transformations of Christianity," says : "It is impossible to comprehend in St. Paul, either the man or his work, unless his doctrine be taken into account. But the converse is not less true. His doctrine is explicable only through his character, and especially, through the struggle in which his whole life was engaged. Chronologically, he was the first of the great theologians. His epistles are the oldest monument of the religion of Christ. And it has been rightly said, that if the Gospels never had been written, all

their essential elements would be found in the epistles of Paul. If he became a theologian, it was because he aspired with his whole soul after holiness. His whole theology rests, not only upon the antagonism of Christianity with Judaism, but upon the more radical opposition of the Jewish principle to the Christian principle; of exterior legality to the interior life. It is by the spirit alone, the heart, the conscience, the real feelings, the inner life, that man becomes holy and just. According to him, faith is the adhesion of the entire soul, convinced, penetrated, regenerated; embracing with all its strength, truth, Christ, God."

If you want rigid intellectual process, you find it in St. Paul. If you want a thinker, easily the master of such thinkers as Augustine and Calvin and Edwards, you find him in St. Paul. But out of this thinking, out of these pure intellectual processes, like the graceful flowers on the edge of the beetling crag, which cannot be climbed, springs the very sweetest bloom of all Christian life; comes a tenderness which links this great Apostle, not to the Grecian type of mind, which is often sensuous, and even voluptuous in its worship of the living God. The Apostle loved man, not merely as created man, but as redeemed man; as redeemed man under greater, and not less condemnation because redeemed. When he talks about being willing to be accursed from Christ, it is not for the pagan nations. It is for those who have been upon the very mountain-top of privilege; in the sunlight of God's truth, who have had their Pisgah of privileges, "to whom pertained the adoption, and the glory, and the covenant, and the giving of the law, and the service of God, and the promises; whose are the fathers, and of whom, as concerning the flesh, Christ came, who is over all God blessed forever." His excess of tenderness, even to the very edge of seeming blasphemy, springs from his sense of what it is in God's thought, to be redeemed, and yet to reject redemption. The Judge of all the earth says: "This is the condemnation, that light is come into the world, and men love darkness rather than light, because their deeds are evil." The redemption introduces a new standard of judgment; a higher standard, not a lower; a new motive to deathless activity; a new inspiration to sensibility; a new kind and degree of sensibility; even that of the Godhead itself.

Says Lecky, in his "History of Rationalism," "The general bias of the intellect of the age is in the direction of rationalism. In other words, there is a strong disposition to value the spirit and the moral element of Christianity, but to reject dogmatic systems, and more especially miraculous narratives." Men say, "We have the Christian idea, the meat of the nut, what do we care for the husk, the shell, which protected and conveyed it?" Ideas need to be formulated, in order to be protected and conveyed. Blot out the didactic statements of Christian truth, inspired and uninspired, and how long would the Christian idea remain? Here is a rationalism that is so rational, that it will not accept intellectual processes; it will accept the spirit and moral element of Christianity, but not dogmatic systems, not miraculous narratives. The spirit of Christianity, the morality of the Christian system, is a thing *sui generis*. It can be produced by only one method. It comes from experiencing the truth as it is in Jesus; finding out that it is true for one's self. Take the doctrine of the atonement, for example: It has an intellectual form; a form that is first addressed to the intellect. Held there, it produces no more spiritual or moral effect than would the binomial theorem, or the Copernican system. But through the intellect it reaches the conscience; just as the mountain trees gather moisture for the meadow. If Christ died for St. Paul, St. Paul is a debtor to Christ; owes that debt! That debt makes him debtor to the whole human family, as well as to Him who died for them. But Christ died for St. Paul, as a sinner; was made sin for him; in some mysterious but no less real way, died the just for the unjust. This touches St. Paul's sensibilities, then his affections, then his will; until he comes at length to be sanctified will; God-possessed, as the powers of Nature are God-possessed; as the ministers of God, that do His pleasure in Heaven. And thus you may take every one of the fundamental Christian doctrines, and point out how they are through the intellect, for the conscience, the sensibilities, the will; until the new man rises up in the fulness of the stature of the image of God; renewed, transformed, irradiated in every faculty and element of his being!

It is very suggestive to see how such a nature as that of

Charles Kingsley, broad Churchman as he was, speaks of the Trinity; one of the most abstract and mysterious of all abstract doctrines; a doctrine which it took three or four centuries to formulate. "My heart," says he, "demands the Trinity, as much as my reason, I want to be sure that God cares for us, that God is our Father, that God has interferred, stooped, sacrificed Himself for us. I do not merely want to love Christ—a Christ, some creation or emanation of God's—whose will and character, for aught I know, may be different from God's. I want to love and honor the absolute, abyssmal God Himself; and none other will satisfy me; and in the doctrine of Christ being co-equal and co-eternal, sent by, sacrificed by His Father, that He might do His Father's will, I find it. And no puzzling tests shall rob me of that rest for my heart, that Christ is the exact counterpart of Him in whom we live, and move and have our being. The texts are few. On them I wait for light, as I do on many more. Meanwhile, I say boldly, if the doctrine be not in the Bible, it ought to be; for the whole spiritual nature of man cries out for it." Charles Kingsley's love of humanity was colored by his idea of God in the flesh. Humanity was the shechinah out of which God was shining. He took his Trinitarianism into his humanitarian work; and he labored for man's salvation because God had so put Himself into the project as to die incarnate.

I admit that orthodoxy, correct thinking has been sometimes made a fetich, and creeds a shibboleth. It is just as true of the cry of liberality; which is the idol of to-day; the fetich, the shibboleth of to-day. But there are things, which, if we give away, we betray our Lord; if we say God-speed to them, we become partakers of the evil that is in them. The men of this generation are living on the theology of past generations. The fathers had meat to eat that we knew not of. It was our pabulum too as we slept in the loins of the fathers. It has gone into the fibre of our being. We took it in with our mother's milk. When Charles Kingsley's father died, he thus speaks: "It is an awful feeling that of having the roots which connect one with the last generation torn up, and having to say, 'Now I am the root, I stand self-supported: with no older stature to rest upon.' And then, one must believe that God is the God of Abraham, and that all

live to Him." The *morale*, the God-fearing valor, the downright, heroic earnestness of our fathers came from their belief in fundamental truth; in a general sense, from their Calvinism, their Augustinianism, their Paulinism! The present is a period when nothing is more popular than to speak disparagingly of the value of doctrinal symbols, when men are ready to subscribe to almost any statement, for substance of doctrine, if they may be permitted to put their own construction to it, so little do they care what they think. Admitting all the mistakes of the fathers, may we not believe that the reaction against didactic theology has gone far enough for safety?

There is, doubtless, something worse than heterodoxy in thinking. It is that moral dishonesty which tempts a man to hold to a form when the spirit has left it; when it is like the body of Lazarus in Bethany—dead four days already; and especially to hold to it for position or salary. In one of his letters, Frederick Maurice writes: "You speak of some who have charged me with departing from the orthodox faith. So long as I continue a minister of the Church of England, such an imputation affects not only my theology, but my moral character; it is a direct impeachment of my honesty." It has been so long the fashion to speak in disparagement of Christian doctrines as such; to ridicule old statements of doctrine; to subscribe to doctrinal symbols for substance of doctrine when a man held directly the opposite; that moral honesty respecting what a man does believe is getting to be almost the exception. Frederick Maurice meant to imply that he held himself as in sacred duty bound to preach the doctrines of the Church of England, or to vacate his pulpit. Charles Kingsley was just as conscientious: "My rule has been to preach the Athanasian creed from the pulpit in season and out of season; to ground not only my whole theological but my whole ethical teaching formally and openly on it; to prevent, as far as possible, people from thinking it a dead formula, or even a mere string of intellectual dogmas." A man's conscience cannot be bound as to what he shall think; but it is no longer a Christian conscience when he believes one thing and teaches another; when he stands between the living and the dead, saying one thing to his

people and another in his own heart ; or when, for the sake of securing or holding a place of power and influence, with his own hand he subscribes to that which his reason and his heart reject.

There are certain things to be remembered: First. That just in proportion as doctrinal statements are accurate they are the simplest and most condensed statements of facts. James Freeman Clarke says of the doctrines of the Incarnation and Trinity, that both of the mere " illogical and false as Church doctrines, but they represent most essential facts." This is all that need be claimed, and it is a claim that justifies doctrinal formulæ. Secondly. To dispense with formulated statements of Christian doctrine does not make the facts any less facts ; but it does tend to make men disbelieve them. There can be no classification of the facts of Christianity without doctrinal statements. Erasmus says : " Every theological definition is a misfortune." Why not every astronomical as well ? Thirdly. There can be no progress in the study of Christian doctrine except through formulated statements of facts already classified. The Bible is the firmament of religious truth. It is from heavenly bodies already located that we fix the place of those suspected or newly-discovered. The science of mathematics has a problem of this nature : a line approaching nearer and nearer to a curve, which it can never reach. And yet, even this problem, mathematics undertakes to formulate. Knowledge of God, either logically or spiritually, involves elements like those in the problem of the asymptote—an eternal approach and yet a distance still infinite. Theology is the algebraic statement of great facts and relations as between man and God. The binomial theorem was just as much a fact before Sir Isaac Newton as afterward ; justification by faith just as much a fact before St. Paul as afterward. The best formulæ of mathematical facts make the best algebra, and the best formulæ of biblical facts the best theology. There are mighty symphonies in the great organ of God's truth which no finite mind can combine, which no finite hands can bring out. But the hour will come when God will open all the stops, and when He who is the Truth, still our great Teacher, with His human touch, as in His earthly life, will show that " of Him, and to Him, and through Him are all things; to whom be glory forever and ever. Amen."

THE SUBSTANTIAL PHILOSOPHY.

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CONCISELY defined, the Substantial Philosophy is a system of scientific, philosophical, and, in its ultimate bearing, religious teaching, growing legitimately out of one single, broad and basic principle of science, namely, that every force of nature, or phenomena-producing cause in nature, by which any sensuous or other observed effect can be produced, must, in the very necessity of things, be a substantial entity or objective reality; and consequently that light, heat, sound, electricity, magnetism, cohesion, and gravitation are as intrinsically and as really substantial entities as are the physical sources from whence they emanate, or as are the material bodies which they affect. . . . This is the basic element of the Substantial Philosophy, and it is the chief corner-stone upon, and over, and around which the superstructure of Substantialism has been reared, and is now being formulated and wrought out into presentable shape.

Of course this broad statement of physical law flatly antagonizes much of the current doctrines as set forth in our scientific and philosophical text-books, and much of the scholasticism taught in the schools and colleges of the world. Such a broad law as the basis of a Substantial Philosophy also necessarily repudiates the idea that force in any of its forms, or that any sensation-producing cause can be a mere mode of motion; that is to say, this philosophy totally denies that any phenomena-producing cause in nature can consist of the mere motions of material particles of air, ether, or any thing else, as our text-books tell us with reference to several of the recognized natural forces.

The new philosophy, on the contrary, maintains that the mere *motion* of a body, whatever may be its size, is the phenomenal effect of some substantial and extrinsic force as its

cause; and hence, the current assumption that the motions of air-waves constitute sound in its external or physical sense, while the force which must of necessity accompany such waves as their cause in order to keep up their condensations and rarefactions is *nothing entitative*, is too great an error to be entertained for one moment by an intelligent investigator of physical phenomena. Hence, Substantialism lays down this proposition as one of its basic principles, that motion, *per se*, as the effect of some form of force as its cause, is intrinsically *nothing*, just as the shadow of a tree is nothing except the phenomenal effect of the substantial force of light as its cause. Motion, therefore, according to this view, is a mere changing of the position of a body or substance in space, and since position, *per se*, is nothing, whether at rest or changing, being pure space, just as a shadow is nothing whether moving or at rest, motion is therefore demonstrated to be a nonentity since motion, of whatever character, had no existence before the moving body commenced changing position, and manifestly, as all will admit, must cease to exist as soon as the moving body comes to rest, a fact which cannot be predicated of any substantial entity however tenuous or intangible it may be to our sensuous observation.

Such is the fundamental conception and definition of all motions according to the Substantial Philosophy, when conception and definition are regarded as lying at the very foundation of all true scientific or philosophical knowledge, and a radical misconception of which has led to every error concerning the nature of force now taught as physical science. This radical view of motion, as a mere phenomenon of some substance whether visible or invisible, whether corporeal or incorporeal, and not in any possible sense as an entity or objective thing, disposes at a single stroke, if such view be correct, of all the so-called modes of motion as taught in physics, such as those of sound, light, heat, electricity, magnetism, etc., a fact which will more fully appear as the unfoldment of this philosophy advances.

It was in the year 1874 or 1875 that the attention of the author of this paper was called to the necessity of meeting materialism on its own ground, and either silencing its objections

to religion, in the manner as just set forth, or else of publicly abandoning any substantial or rational hope of a future life based on the analogies of science.

After studying carefully the mode-of-motion theories as set forth in our text-books, and as everywhere taught in our schools, and after trying in vain to reconcile them with the possible substantial nature of life, mind, soul and spirit as a basis for immortality, we came to the most solemn, deliberate, and what we regarded as the most important conclusion of our life, namely, that either the soul, life, mind, and spirit were mere molecular phenomena, and consisted of the motions of nerve and brain particles as claimed by Haeckel and Huxley, precisely as sound consists of the motions of air-particles, and heat and light of the motions of ether particles, or else that the whole range of physical science, as taught in our colleges, must be wrong from beginning to end.

Viewing the premises thus, what was the position to which we were driven? We saw at a glance that no middle ground could exist in any kind of force, between *motion* and *substance*, difficult as it seemed to be to make such phenomena-producing causes as sound, light, and heat rank as substantial entities according to any definition of substance we had yet seen. Hence, as the dictionaries of our language had generally been compiled and revised under the same materialistic influences of our colleges which tolerate the teaching of the vibratory theories of sound, light, and heat, implying that there was nothing substantial in existence except matter in some degree of attenuation, we were compelled, at the very start, to revise the definitions of scientific words, especially that of *substance*, and to assume that not only were material bodies substantial, but that every form of natural force, by which an observed effect can be produced, is also a real substantial though immaterial entity. Either this view must be adopted, or else that all the forces, including life, mind, soul, and spirit, must be regarded as but the phenomena of matter under molecular vibration, and therefore, as mere motion, must, as the materialist urges, cease to exist whenever the vibrating particles come to rest.

We saw that if one single form of force, or one single sensa-

tion-producing cause in nature could not be maintained successfully in this crusade against modern science as a substantial entity, and thereby be demonstrated to be in no sense a mode of motion, we might as well surrender the struggle at the start, since one single acknowledged exception to the substantial category, such as *sound*, would virtually be equivalent to the loss of all, because this one exception to the absolute substantial nature of force, would be all that Haeckel and Huxley would ask as the coveted natural analogy, based on admitted scientific truth, upon which to seize as their stronghold, and from which to hurl their materialistic thunderbolts to shatter the hope of immortality by the analogical proof thus established.

We were compelled by logic, and by sheer necessity, therefore, to make our chief attack upon the wave-theory of sound as the battle-ground, *par excellence*, on which mode-of-motion theorists dared to risk the campaign, with the tacit understanding all round that if the current theory of acoustics, as the champion mode of motion in physical science, should break down, and should sound turn out to be a substantial force, instead of wave-motion of the air, it was wholly useless for physicists to lift a finger or utter a word further against the truth and universality of the claims of Substantialism.

At this juncture in our preparatory investigations, we were necessarily led to consider the essential nature as well as proper philosophical classification of *Substances*, embracing as they must, according to the new departure, not only all material things, of whatever grade of density or tenuity, but also all classes of entities above the material or corporeal plane of existence, such as the imponderable forces. The idea of immaterial *substances*, by which we defined such entities as could permeate or pass freely through solid bodies in various degrees of defiance of material conditions, was one of the peculiar features of Substantialism, as well as one of the stumbling-blocks of the regular scientist whose education and habits of thought had been such that he could not conceive of *substance* that was not *matter* in some degree of attenuation or refinement.

This generally accepted view of *substance*, as only a term synonymous with *matter*, forced us carefully to consider and

point out the true scientific distinction which should be kept up between these two terms. We explained, that while *substance* was the universal term denoting all entities, of whatever form or variety in the universe, *matter* was a specific or limited term embracing but one general department or classification of the universal entities included in the term *substance*.

This essential distinction is aptly illustrated by innumerable references to minor grades and classifications existing among material bodies all around us and well known to every observer. Those who have experienced a mental difficulty in conceiving of a difference between *substance* and *matter*, should reflect that while all *wood*, for example, is *matter*, it by no means follows that all *matter* is *wood*; *matter*, in this case, being the generic or more general term, while *wood* is the specific term. While all *oak*, for example, is *wood*, no one would be so shortsighted by education or habits of thought as to conclude that all *wood* must therefore be *oak*. While all *iron* is *metal*, would any of my auditors insist therefrom that all *metal*, as a consequence, must be *iron*? . . . And so on with thousands of equally pertinent illustrations existing everywhere in the system of nature. How plain, then, must it be to the thoughtful student of science that while all *matter* is *substance*, it by no means follows that all *substance* is *matter*, the generic or more general term, *substance*, including the minor or more specific term, *matter*, but not *vice versa*.

Thus we labored to pave the way for Substantialism by first pointing out this universal classification of all the entities or objective existences in nature, dividing them into material and immaterial substances, and thereby showing in advance that light, heat, sound, gravity, magnetism, cohesion, electricity, life, mind, soul, spirit, including God Himself, might be as really substantial, or as really entitative, as is the earth we inhabit, without such forces or entities in any degree being constituted of *matter*.

This initial point in the preliminary work of the substantial reconstruction of science having been made clear, we were abruptly met by the question, What definite proof is there that any one of the physical forces named, as a test case, is a real

substance, by which rationally to infer the substantial nature of all? Can any single form of natural force be selected and specified as a guarantee for the general truth of the claim of Substantialism that force *per se* is an immaterial substance?

To meet this interrogatory fairly and decisively, as it had to be met in order to form a scientific basis for a new physical philosophy, we made our selection, and took from the list the force of *magnetic attraction* as the crucial substantial test of all the other forms of physical force or phenomena-producing causes. We could have selected any other, but this will do. Let us now expose most carefully to the thinking ladies and gentlemen present, the drift of our scientific reasoning and experimental investigation with the force of magnetism by which we were confirmed in this initial stage of the Substantial Philosophy, namely, that all force is necessarily substance.

A permanent steel magnet will lift a piece of iron even when separated from it at a considerable distance; no body or entity can thus act on another and distant body so as to move or displace it, thus overcoming its inertia, unless an actual moving substance of some kind, visible or invisible, tangible or intangible, connecting the two, is the cause of affecting such displaced body. Hence, there must be, in the very necessity of the case, a substantial something—a real entity—reaching out from the magnet, to seize upon and move the distant piece of inert iron, or else by every principle of rationality known to man that piece of iron would not move. This must be true in the very nature of physical law, or else we have an effect without a cause—a manifest and self-evident impossibility. [The lecturer here illustrated the action of the magnet on a piece of iron.]

We thus demonstrate as completely as any physical truth is susceptible of demonstration in nature, that the force which issues from the permanent magnet and causes the distant bar of iron to move, is a real, substantial entity; and not being recognizable by any one or more of our senses; and not being subject to any chemical or mechanical test, whatever, by which to prove its existence as a refined form of matter; and finally, acting, as it does, so far as any experiment will show, with precisely the

same amount of moving power through the most impervious material bodies, such as intervening sheets of glass, and to the same distance exactly as if nothing but the air were interposed, we are irresistibly compelled to accept magnetic force not only as a *substance* but as an *immaterial substance*. So wholly unrecognizable by sense or by any physical test is this real substance which reaches out from the magnet to move the distant piece of iron, that but for our higher faculty of reason in judging of its actual substantial existence from observing its actual mechanical effects, we could not know of its existence at all. What better proof does the unbiased atheist want for the probable existence of a God than the moving, working energy of this intangible, invisible, unrecognizable and incomprehensible substance called magnetism? as Joseph Cook asked of his Cleveland audience in his eloquent and powerful style in his late lecture in that city.

But suppose that molecules and atoms do exist in steel, as modern science assumes, and that they are in a state of vibration, as Sir William Thomson teaches, in order to constitute the force of magnetism, what force is it which causes the molecules to vibrate? That's the question. Do these supposed inert particles of metal rotate or vibrate of themselves, or are they thrown into rotation by the magnetism? If the latter, are there two magnetisms, one back of the steel molecules to cause their rotation, and the other the rotary motion itself thus caused by which the distant piece of iron is displaced? If so, why can't the first magnetism, or force, back of the molecules, and which causes them to vibrate, take the place of the second magnetism, or the mere motion of these molecules, and thus act direct upon the distant piece of iron? . . . In opposition to this contradictory doctrine of the oscillation and continual bombardment of material molecules, as all there is of force, we present the simple, beautiful, and consistent doctrine of Substantialism that this magnetic energy is a *substance* as real, though immaterial, as is the magnet from which it issues, or as is the iron bar which it displaces, and which it will displace all the same if suspended in a torricellian vacuum, thus proving that atmospheric vibration has nothing to do with it.

And here let me state a universal law which is very simple and very beautiful. No form of physical force except that of cohesion acts directly upon matter or affects it in any way. *Cohesion*, according to Substantialism, is the regnant or governing force in the physical realm, and every other form of force, such as heat, light, sound, electricity, magnetism, or gravitation can only affect or influence a material body by correlation with the reigning physical force of cohesion. If heat takes possession of a body and melts it, it acts alone upon the cohesive force within that body. If light passes through a body, it is alone because cohesion has so arranged the particles of that body as to permit light to pass. If electric force passes through one body with greater facility than through another, it is solely on account of the greater co-operation of cohesive force as it exists among the material particles constituting such body.

Does heat consume a mass of combustible material as a mode of oxygenous motion by causing a tremor in the molecules of the wood? or does it do its work as Substantialism teaches, by this one form of force overpowering cohesive force, thus converting the latter, in both the wood and the oxygen of the air, into additional heat-force for keeping up and extending the conflagration?

In ordinary matters no intelligent man would be so unwise as to suppose nature abruptly to depart from a concurrent and harmonious chain of proceeding, to a perfectly incongruous process for accomplishing analogous ends, unless, from the absolute necessities of the case, such departure were sustained by unquestionable evidence.

After comparing the phenomena of the various forces, the writer of this paper went into a critical analysis of the five senses, and made a careful examination of their relation to each other and the manner in which they are variously addressed and affected, from the lowest to the highest of nature's economy, in order to determine if the harmonious regularity there manifested and maintained did not justify and bear out his general conclusions concerning the harmonious order of the physical forces and their uniform substantial nature. The parallel was singularly maintained.

Take the fact that the sense of touch or tactility can only be addressed and affected by the actual contact of the body felt; take the fact that the sense of taste can only be impressed by the substantial flavored particles as they come in contact with the palate or gustatory membrane; take the fact that the olfactory sense can only be affected and impressed by the actual contact of the substantial odorous particles as they emanate from the odorous body and strike the nasal membrane; and then we ask, is it reasonable—is there a grain of scientific or philosophical rationality in the current assumption—that as soon as the sense of smell had been organized, for receiving its impressions by the substantial contact of odorous particles, nature took an abrupt leap from this substantial entity, odor, to non-entitative motion in sound for the sense of hearing? Would it not have been more in keeping with reason and the consistent harmony of nature's laws and processes, to have kept right along on the substantial basis of contact, as the physical cause of sensuous effects, for all the avenues to animal perception, rather than to have changed from substance to mere motion? Was there any necessity for such change, according to all rational analogy?

Why might not *sound* as a substantial force, analogous to substantial electricity, have addressed our auditory nerve in pulses, and thus have produced the complex sensations of sound, as readily as can substantial odor produce the equally complex sensations of smell? What reason or consistency was there in the system of nature for adopting two different and incongruous arrangements by which three of the five senses (touch, taste, and smell) should receive their impressions by the substantial contact of the bodies adapted to their sensuous necessities, and that the remaining two senses (hearing and sight) should be addressed on an entirely different principle, namely, undulatory or wave-motion, when, by still more refined forms of substance, both the senses of hearing and seeing might have received their sensuous impressions by substantial contact almost exactly similar, or at least entirely analogous to the action of odor in the sense of smell?

Newton during most of his life advocated the emission or

corpuscular theory of light, supposing that luminous rays consisted of very finely attenuated material particles shot through space at the enormous velocity of about 180,000 miles a second. How he could have entertained such an improbable idea, that any material particles, however small, could enter the eye at such velocity without damage to so delicate an organ, is a matter of profound astonishment to modern physicists. The reason, however, is plain to the writer, and consists in the fact that it had never entered the mind of that great philosopher that a vast preponderance of natural substance does not consist of matter at all.

Had Newton, when attacked by Huygens upon the absurdity of his little material balls shot into his eyes from the sun at the known velocity of light, been a substantialist, he could quietly have stood his ground, folded his arms, and replied, that substances are of two kinds, immaterial as well as material, and that light, being an immaterial substance, no more produces a physical effect upon a human body, except to cause its appropriate sensation, than can a substantial stream of magnetism put out the eyes by entering them ; no more than can a stream of substantial sound be smelt ; or than can a stream of substantial light be tasted.

Surely, substantial pulses of light itself, as an immaterial entity, would have met every emergency in science and explained every mystery encountered in the phenomena of light, as well as would pulses of this material substitute, *ether*. Why, then, was this idea of an all-pervading material substance invented by Huygens ? Simply because neither he nor Newton had formed the first conception of the mystery-solving principles of Substantialism which recently, by touching sound and light, have transformed them both from meaningless modes of motion to their true status as substantial forces of nature.

Huygens, forgetting that there were three of the five senses, below the sense of hearing, which might form a guide to the proper understanding of the higher senses of hearing and sight, as well as throw light upon their sensation-producing causes, simply took for granted the fact that sound, as an external cause, was universally conceded to be the wave-motion of the

air, without ever asking the question if such a view of sound and of the sense of hearing were justified by the facts of nature. Having Newton also irrevocably committed to the wave-theory of sound, he had no difficulty in so pressing his new departure of ether-waves upon his opponent's mind, that the great philosopher at last succumbed, and surrendered his material light-corpuscles for the newly invented material waves of ether. What real advantages, however, were gained by Newton, in thus exchanging his material corpuscles for material waves, we have always been at a loss to divine. One would suppose that ordinary human eyes could endure the one about as well as the other, since both waves and corpuscles were admittedly constituted of *matter*, and travelled at the same velocity.

Newton saw and keenly felt the predicament in which he had unexpectedly placed the wave-theory, and even tried to explain the discrepancy, thus shown to exist, between formula and observation, by supposing about one-ninth of the air to be constituted of "solid particles" whose "crassitude" permitted the passage of sound instantaneously through them, thus recovering the 174 feet a second lost by the formula; but he was soon worried out of this weak suggestion by the ridicule of his compeers, thus leaving the theory broken down by common consent, though never abandoned, till at last Laplace, the eminent astronomer, struck the happy thought which brought scientific daylight out of this undulatory darkness.

This great discovery of Laplace, by which still to vindicate the so-called formula of "density and elasticity," and thus to rehabilitate the theory killed by Newton's mathematics, consisted of the astute guess that the supposed "condensations and rarefactions," which occur in sound-waves, generate just enough heat and cold to add, by their augmentation of atmospheric elasticity, the missing link of 174 feet a second to the velocity of sound, and thus to account for Newton's demonstrated discrepancy.

Plainly, a powerful condensation in the air-wave, as in the case of a loud sound, ought to produce more heat and elasticity than a very trifling condensation, as in a faint sound.

We assert it to be a fact, and will proceed at once to prove

it, that the wave-theory teaches that all sound-waves, whatever the intensity of their sound, produce the same condensation of the air and consequently generate the same amount of heat by compression. Not one physicist, from Newton down to the present, has dared even to hint on paper, and thus place on record, the amount of condensation of the air and consequent heat a sound-wave generates in order to equalize this discrepancy of 174 feet, till at last Prof. A. M. Mayer, of the Stevens Institute of Hoboken, N. J., in his able article on sound, in *Appleton's American Encyclopedia*, publishes to the world that the heat generated in a sound-condensation is the equivalent of "1-679" greater density in the compressed half of the wave than the density of the normal air—not the slightest hint being given of any difference between a loud and a soft sound. Of course, if there were any difference in the degree of condensation in loud and soft sounds, Prof. Mayer would have been the man to suggest it. But Prof. Mayer's unfortunate figures have actually killed the wave-theory even deader, if possible, than did Newton's mathematics, for this very "1-679" increase of density in the compressed half of the sound-wave over that of the ordinary air, indicates the exact amount of mechanical pressure exerted upon one half of a given mass of air when filled with sound. All this seemed harmless enough to the distinguished American physicist, until this pressure-calculation happened to be carried out for some particular sound, when behold ! it was discovered, to the consternation of physicists, that it gives the *locust* (which can be heard a mile in all directions) a mechanical squeezing power upon this mass of air of more than 5,000,000,000 tons, or the working energy, by its act of stridulation, of more than a million locomotives.

The foregoing, however, are only mere specimens of the arguments which, in defending the substantial nature of force, necessarily grew out of the controversy which has been raging for these more than eight years past. As sound was regarded by physicists the most unquestioned as well as unquestionable of all the modes of motion taught in physical science, since the undulatory theories of light and heat, with the very *ether* on which they were based, were the legitimate offspring of the

wave-theory of sound, as the mother of all living wave-theories, it was natural and even unavoidable, in attempting to formulate a universal philosophy of Substantialism, that this theory of atmospheric sound-waves should be the field where the chief battles of the campaign would have to be fought, and where the final victory for the new departure should be won, if won at all.

The argument, briefly stated, is this: If sound consists of atmospheric pulses sent off from the vibrating instrument, as the wave-theory teaches, it is plain that the more powerfully such instrument vibrates, the stronger will be these atmospheric pulses or condensations and rarefactions, the louder will be the sound produced, and the greater will be its range at a given pitch or given number of vibrations per second.

But is it true that the more powerfully the sounding-instrument vibrates, and the more powerful are the air-waves sent off, the louder will be the sound? We answer no. Take a tuning-fork, for example, strike it heavily, and hold it in your fingers, and though its prongs are swinging to and fro a distance of a sixteenth of an inch, thus "carving the air," as Prof. Tyndall expresses it, into "condensations and rarefactions," and sending them forth as sound-waves at a velocity of 1,120 a second, yet it is an observed fact that its sound cannot be heard by the sharpest ears more than six or eight feet away, notwithstanding these powerful atmospheric pulses which alone constitute sound according to the wave-theory. The same is true of a heavy wire chord stretched over rigid iron supports, unconnected with any sound-board for producing resonance. Its sounds, when thrummed heavily, can only be heard a few feet away in a still room, notwithstanding the large and powerful air-pulses thus sent off.

Now comes the *denouement* of this unanswerable argument. A locust of a certain species, familiar to everybody throughout the United States, and weighing less than a single grain, will sit on a green leaf and by a tremor of its thorax scarcely visible—at most not more than one-tenth that of the vibration of the tuning-fork or string referred to—will issue a sound that can be heard a mile in every direction, thus with one-tenth the action upon the air of either the fork or string, in the shape of condensations and rarefactions, will produce a sound of 800 times

the range, and of more than 80,000,000 times the volume, by accurate estimate. And all this is true, even when the fork and string employed are of the same pitch or number of vibrations per second as is the sound of the insect.

Thus do we demonstrate that sound does not and cannot consist of air-waves, but on the contrary that it must be a substantial force depending, for the intensity of its radiations, upon the sonorous property or quality of the sounding instrument from which it emanates, and not in any sense upon the mechanical or condensing effect such instrument produces upon the air.

If it be asked, on the supposition that sound is an entity, what becomes of this substantial sound-force after its manifestation ceases, whether it is annihilated, whether it is created out of nothing, or made out of the material substance of the sounding-instrument, and whether or not the locust in stridulating for a long time would not finally dissipate itself, and its body disappear in this so-called sound-substance, etc., etc., we answer, that all such questions are suggested by a want of a comprehension of the grand distinction which we have made in this paper between material and immaterial substances.

The whole universe is full of immaterial substances, as the all-pervading fountain or force-element of nature. No substance, material or immaterial, can be lost or annihilated, and no new substance can come into existence; it can only be changed in nature and form, by that uncreated and self-existent power which organized and now holds the universe together. By the various processes ordained in nature, the different forms of force, for manifestation, are drawn from the universal fountain of force in the shape of sound, light, heat, gravity, cohesion, electricity, magnetism, etc., and in like manner, from the higher domain of this same force-element, correlated to the personal and infinite God of the universe, are drawn the vital, mental and spiritual forms of force for the use of organic beings, and by the processes ordained in nature to these ends.

When a light disappears, or a sound ceases to be heard, the force which caused and constituted it is not lost, but is conserved in the universal fountain whence it came in obedience to the

natural process which manifested it. A magnet may issue streams of substantial force for thousands of years, and yet not the smallest particle of its own substance will disappear thereby, since the magnetism, though *substantial*, is *immaterial*, and hence, is no part of the magnet itself, but is brought constantly by it, as an agent, from the force-element of nature as the supply fountain for that special manifestation; and as this substance radiates from the magnet's poles, doing its work, the law of the conservation of all force and energy carries its substantial currents back whence they came, to be conserved till again needed either in that or in some other form of force.

But this higher phase of the Substantial Philosophy which we are here approaching carries us into a field of thought, research and speculation upon which nothing can be said in this limited paper. Our aim has been simply to unfold the fundamental principles of this system of doctrine, and explain the scientific ratiocination which led to its establishment as a new departure in philosophy. We firmly believe that the more the foundation-principles of Substantialism, as here set forth, are elaborated, and the correlations of the substantial forces traced and followed up toward their infinite source and primordial fountain, the more beautiful and sublime will the philosophy itself become, founded as it is upon the broad and revolutionary principle that all force, in the essential nature of things, from that which holds a grain of sand intact, to that which keeps Neptune in its orbit—from the vitality of the lowliest worm, to the spiritual essence of Deity Himself—is of necessity a substantial entity.

VIEWS AND REVIEWS.

THE LIGHT AND THE DARK.—Mr. Elliott F. Shepard has kindly furnished the pictures in front of this number, together with the following observations :

I.

The pictures are engravings of photographs taken from life and show the Light and the Dark of Syria.

On the right, standing at the entrance of his little, low, old stone synagogue at Nabulus, the scriptural Shechem, is Jacob the Samaritan High-Priest, with whiskers, hair and eyes as dark as mystery; and beside him is the famous Samaritan Pentateuch, written, as he says, by Abishua, the son of Phineas, who was son of Eleazer the son of Aaron, three thousand four hundred years ago, in the ancient Hebrew, upon parchment with yellowness, patchings and distinctness as curious as a mine.

Nabulus (Shechem) is now a thriving city of twenty thousand population, half that of Jerusalem, and has long been piling up the ashes from its extensive soap manufactories in the most convenient proximity, raising them to hills over which verdure has crept and streets have crossed and buildings appeared, until a new row of stone dwellings, which we saw erecting there last May, was a hundred feet above the street of the old synagogue. As the dwellers are dust, this is a case of *dust to ashes*; and each succeeding is truly a *rising generation*.

Shechem is 1,900 feet above, and in sight of, the Great Sea, and between Mounts Ebal and Gerizim, the former of which is 3,000 feet high and the latter 2,900, the scenes of the cursing and the blessing under Joshua. But before that, there the Father of the Faithful saw God, and was promised the land; there the Patriarch Jacob buried the strange gods of his heathen servants, and there the bones of Joseph had set the obelisks the example of migration from Egypt by coming up to be buried; and, after that, Abimelech, having slain seventy sons of his father Gideon, there got himself futilely proclaimed king; and the divine-right

king, Rehoboam, son of Solomon, tyrannically alienated the ten tribes ; and the King of kings "sat thus on our father Jacob's well" while a woman was His priestess to carry the Gospel even to our age. Now, the Samaritan women are not allowed to be educated, because they have no time to learn, nor to attend synagogue; and that is black enough.

The Samaritans are monogamists, but allowed a second wife if the first bears no children. Yet the females number less than the males—so old bachelors must be on the increase among them.

According to High-Priest Jacob, anciently all Israelites, numbering millions, followed with Samaritans. Seven centuries ago that community were a thousand, and lived in various towns—now Nabulus-Shechem contains every man, woman and child of them, totally numbering 180 souls—a lessening which would please the shade of Malthus. Jacob says that the men of Judah and Benjamin tell them that the cause of their diminution is their continued use of the ancient Hebrew, the characters in which God wrote the Decalogue, which is too sacred for human use; and that Judah and Benjamin were diminished until, at their lowest ebb in Babylon, they adopted the Chaldaic, and thence began to increase again.

At our visit in the old synagogue, which is in a steep, narrow, crooked, gloomy and partially subterranean street, all their males were assembled in the service of the passover. The whole community usually spend the passover week on Mount Gerizim, but had just been brought down thence in the midst of the feast by the serious sickness of one of their leading members, who died, and they had buried him, and it was too fatiguing to return to the summit. Death acted as showman for us. If the leading member had not been obliging enough to die, we should have found an empty and barred synagogue, and should not have seen the wonderful old codex, nor the spliced ritual, nor heard the chants, which are the prototypes of those of the Roman Church.

No sooner had our party become visible at the open door of the synagogue, than the assistant high-priest stopped the service, came and saluted us, brought us the manuscript Pentateuch in

its metal case covered with velvet embroideries, and upon its rolls of brass, and civilly answered our questions. While thus engaged, the high-priest, in order to survey the children of the Setting Sun, came to the door, with the excuse of hawking and spitting, and returned to his interior niche leaving each of his eyes with us.

Both these persons spent an hour in our tents, under the direct and cross-examination of the Gospel and the Law. The first being conducted by the Rev. Dr. Henry H. Jessup of the American Christian College of Beirüt, and the latter through him as interpreter by the writer.

Jacob, H. P., etc., gave me his photograph, but could not then write his autograph on it, because it was a fast, and in it he could do no work ; yet he would keep it, write on it a sentence from their Pentateuch with his autograph, after the fast was finished, and mail it to me at Jerusalem. Thanks to Rev. Mr. Fallscheer, the resident Christian missionary, this he did.

The autograph is reproduced with the picture.

High-Priest Jacob insisted—

That his people are not Samaritans—in the sense usually defined by history—and also by our Lord, when He said: “Ye Samaritans worship ye know not what”—but Israelites, whose fathers had escaped and remained behind when the Ten Tribes were captured. That they had never intermarried with the immigrants transplanted at that time into their country by Shalmanezar, king of Assyria. That he, Jacob, is in the direct line from Aaron, coming through Uzziah the seventh from Aaron, to whom when twelve years old Eli ought to have given up the high-priesthood, and because he did not, but usurped the office, being a Levite, of the right tribe, but not the right family, God slew him and his sons in the days of Samuel. That the high-priesthood descended to him, Jacob, by the line of the oldest male, whether son, uncle, cousin or nephew, and not in the line of the oldest son only. That the first and only real temple was built on Mount Gerizim, and Uzziah while once officiating in it, suddenly found himself in darkness and in a cave. Then God had him take up the ark, with the two tables of the law, and put them in this cavern; then the golden candlestick, the table of shew-bread, the altar, the laver

and all the temple vessels. When he went out, the cavern's door was closed and a Hebrew inscription appeared above it. Again Uzziah looked, and the inscription was gone, and so was the temple and every vestige of its existence. No one now knows where are the cavern and all these things. Some time or other God will reveal them all again, when the prophet like unto, but not greater than, Moses, shall appear, from either the tribe of Joseph or of Levi, the two tribes represented by High Priest Jacob's followers; but from which tribe, their interpreters were not agreed. That the patriarch Jacob's prophecy about Shiloh had been fulfilled in Solomon, and did not refer to the Messiah; and his blessing of Judah was to the effect that he should wash his clothes in wine, and eat the fat of rams, and was not much of a blessing after all.

That the Samaritans believed only in the Pentateuch, although they had the other Old Testament books, which they regarded merely as intelligent histories.

That since the vanishing of the Temple they offered the passover solely to commemorate God's passing over the Israelites in Egypt, and not as a sacrifice for sin; for that could only be offered, and confession of sin could only be made, and whether or not there was any sin could only be told, at the Temple; and as there was no Temple, it could not be known whether sin was committed, or who had committed it, and none could confess it, and there remained no sacrifice for sin! That everybody who obeyed the Pentateuch would be saved, and people could keep the Ten Commandments if they would; if they did not, and repented, God was merciful.

Jacob, H. P., etc., had read the New Testament, and if it and the other books of the Old Testament (besides the Pentateuch) were true, there certainly was answering correspondence and fulfilment of prophecy, AND JESUS WAS THE MESSIAH! Then, said Dr. Jessup, on your own showing, if you are right we Christians are as well off as you; but if we are right you are in great danger. To which Jacob assented. He was told of the successful education of women in Beirüt. Dr. Fallscheer offered to take all his females into his women's school. But everything was in vain. Nervousness and an excited countenance were the only

apparent outcome of Jacob's glance into the mirror of truth. It did not have the charming effect that General Gordon produced at Kartoum, when he showed Bedouins to themselves in a glass. Jacob experienced no satisfaction. He departed with a downcast look, but making his adieux courteously. The heart is a field; what if the good seed should yet take root in Jacob's!

II.

The other picture, that on the left, is of Doctor Mishaka, formerly of the Lebanon, but for many years and now of Damascus. He was born in the Latin Church; early mastered much learning; excelled in history, mathematics, astronomy and languages; and was beloved and admired by all. Surrounded by Mohammedans, he heard them argue against the Roman and Greek Churches, that they were polytheists for they had three gods, Mary, Joseph and Jesus; that they were idolaters, for they bowed down to, and worshipped, pictures and images; and that they were not good, for they hated and fought and murdered each other so much, that nothing but the Turkish sword could make them desist, or hold each other's lives at a piastre. Then he examined the services in his own parish, and detected many swindles in the shape of pretended miracles by their relics, idols and priests, and other pious frauds, of all which he made a note with date, place and circumstance. Then he visited and studied Greek churches, and Armenian, and found the same sort of imperfection. And the result was that he became an evangelical Christian, and turned his powerful and witty pen against the Pope. So many tens of thousands of copies of his works have been sold to the Arabic-speaking peoples, and so cogent and convincing are they, that he has long enjoyed the sobriquet of "The Martin Luther of Syria." He had been so absorbed in his work as to have forgotten to marry, a very unusual thing, and one which led to a remarkable conference. It is common in the East to stop calling a man by his own name as soon as he has a son, and to call him thereafter the father of that boy, as a mark of respect, acknowledgment, and affection; and it is impolite and insulting thereafter to call him by his own name only.

The municipal authorities took his case into consideration. This was after his emancipation as above narrated. So the rulers and elders of his village waited upon him in a body, and addressed him substantially as follows: You know that we highly esteem and love you, as do all men; yet you have not married, and have no son, though so old; so we cannot express our regard for you according to the ancient customs by calling you the father of any one; this we think injures you in the minds of strangers, for they think that we call you by your own name because you are a worthless fellow, which is unjust. We have long considered your case, and how we and all the people might pay you the honor which your character and age deserve, and protect you from calumny. So we have decided to ask you, supposing you were to marry, and to have a son, what would you name him? Dr. Mishaka was both surprised by this address, and amused inwardly; but seeing the gravity of the situation, after recalling a name which had always been favorite with him, he sedately replied that, were he to get married, and were he to have a son, he should call him Nafis. "Very well," said the municipals, "henceforth your name shall be The Father of Nafis." The matter soon spread, and everywhere Dr. Mishaka became known as the "Father of Nafis." Some twenty years after this, he did marry, and did have a son, and called his name Nafis, and Nafis himself told me the story. Fifty years have passed since those public authorities varied the function of the angel who named Isaac, Ishmael, Cyrus, John Baptist, and others, before birth, by naming the father before marriage—but then they were not angels. Perhaps they may be thought to have outstripped the angels, because, in this case they succeeded in naming both father and son.

The Eastern propensity to apply epithets may be still further amusingly illustrated by this same distinguished man. He had three brothers, each of them a character in his way; and the Arabs formed what they considered suitable spiritual patronymics for all. Dr. Mishaka, they said, was "Good without Evil"; one of his brothers, "Evil without Good"; another, "Both Good and Evil"; and the last, "Neither Good nor Evil."

In April '85, in his spacious and elegant residence at Damas-

cus, surrounded by his wife, his sons and daughters, and their children, I saw this "Martin Luther of Syria," aged eighty-six years, with rosy cheeks, sitting erect on his divan, upon his crossed legs with the soles of his feet turned up to view ; and through Dr. Van Dyck of Beirut (who translated the Bible into Arabic), heard him converse with ardor and eloquence upon the abolition of the papacy, and received from him the autographed photograph which is copied in this number.

III.

It was not till my return to New York that the two pictures were unpacked so that they could be placed together. And what a contrast they make ! The one is courageous and powerful in pose, benignant, confident and intelligent in expression—a source of light. All this is emblematic of the truth that is dawning in the East, and is sure to flood the lands of the Bible.

The other is startled, surrounded with blackness, weak, uncertain, hastening to decay. And thus it represents the hoary errors that are being pierced in the Levant, and which are bound like darkness to flee away.

One is despair waiting for doom. The other is hope bringing in progress.

THE RELATIONS OF MATTER AND SPIRIT.—Wm. Tucker, D.D., of Ohio, sends the following to *CHRISTIAN THOUGHT* :

There exist in the universe two substances—the one as the cause, and the other as the condition of natural phenomena. These two substances are spirit and matter. We have no knowledge of the essence of either. We know spirit through its attributes and matter through its properties. We cognize spirit by consciousness and matter by the senses. It is an intuition of the reason that all attributes and properties must inhere in some substance. This is an axiom in philosophy. It is a necessary law of thought. In all our thinking and reasoning we assume the existence of this law. By its application we reach the conclusion that matter and spirit, body and soul exist. The intuition of unity which gives us the law of contradiction enables us to reach this conclusion.

This law holds that no substance can possess contradictory properties and attributes at the same time—properties and attributes that cancel or destroy each other cannot belong to the same substance. In other words, a thing cannot be and not be at the same time. It cannot have weight and be without weight, possess form and be without form, be extended in space, and be without extension at the same time.

These properties contradict and destroy each other. As propositions they are unthinkable—they are impossible to rational thought. The same substance cannot be intelligent and unintelligent, reasonable and unreasonable, rational and irrational, possess knowledge and be without all knowledge, at the same time and in reference to the same thing. Such a proposition involves a contradiction.

The attributes of spirit as known to consciousness, and the properties of matter as known to the senses contradict and destroy each other, and cannot therefore belong to and inhere in the same substance.

Spirit is conscious, matter is unconscious ; spirit is intelligent, matter is unintelligent ; spirit is active, matter is inert ; spirit has motion, matter has not. This fact is settled by science or nothing is settled.

How can the same substance possess such conflicting properties, or how can the same attributes exist and not exist in the same substance at the same time ? Matter is extended in space, thought is without extension : a yard of thought is inconceivable. Matter possesses weight, but we cannot thus conceive of an attribute of spirit—a pound of benevolence, an ounce of justice, or a hundred weight of compassion would be words without meaning and void of sense. It is thus evident that we cannot think or speak of the attributes of spirit and the properties of matter as belonging to the same substance without great confusion of thought and perversion of language. This necessitates the conclusion that there must and do exist two substances or entities which we call spirit and matter.

The attributes of spirit are known only to the consciousness, and never to or through the senses ; while the properties of matter are known to the consciousness only through the exer-

cise of the senses. This fact appears to separate the two, and make them distinct in our conscious experience and rational thought. They are distinguished in all our experience, language, literature, science, and law.

Every attempt to identify them as one substance recognizes and reveals the great difference between the attributes of the one and the properties of the other. This fact should convince us of the truth of the dualism of nature, and teach us to seek for its unity not in one substance, but in one original cause, plan and purpose.

The great law of unity in variety runs through nature and is the basis of our science and art. This law is necessary to all our practical conceptions of the relations of life ; and the dualism of nature crops out in all the teachings of philosophy, science, morals, and religion. The efforts of modern materialism to ignore this, and bring all phenomena under the control of one law, and unite all conflicting properties and attributes in one substance are in conflict alike with the order of nature, the deductions of reason, and the inductions of science. Such a theory of nature and life cannot be true.

If it be said we know nothing of spirit, the reply is we know it by our consciousness of its activities. We are conscious of thought, feeling, emotion, purpose, volition, and action—of benevolence, obligation, pleasure, joy, sorrow, hope, fear, aspiration, courage, and strength.

Thought demands a thinker, action demands an actor, knowledge a being that knows, and love a person who loves. Even scepticism is impossible without a sceptic, and doubt could exist only in a doubting mind. If there is a fact there must be a doer, if an act there must be an agent, if an effect there must be a cause. We know that spirit exists because we are conscious of thought, feeling, and action.

These are not properties of matter, but attributes of spirit. To deny this is to impeach the veracity of consciousness, and make knowledge impossible. That scepticism which assails all truth and rejects all knowledge can successfully oppose no form of truth.

The theory that all knowledge must come through the

senses and is given us in sensation is untenable, and contrary to experience. We certainly have no sensations of truth, goodness, righteousness, benevolence, faith, confidence, honesty, integrity, morality, virtue, vice, and religion. Do we not know that these principles and qualities exist? We find the words in all languages. Are there no thoughts answering to the words and no things corresponding to the names? This cannot be if language is the body and garment of thought. Our ideas of duty, obligation, cause, order, relation, time, space, number, and beauty were evidently not derived from our sensations; for we have no sensations corresponding to them. We have no senses by which we can reach ideas and states of the mind. We cannot touch, see, hear, taste, or smell them. They have no color, form, weight, sound, odor, flavor, or shape.

There is nothing in them to impress our senses. They impress our reason, our consciousness, our affections, our æsthetic natures, our moral, religious, and social being, but not our senses. We did not, therefore, gain our knowledge of these things by our senses. They are spiritual and are known by the spiritual faculties. We cannot know the essence of spirit.

A knowledge of the essential elements or essence of anything is not attainable by man. We know the attributes of spirit, and we know it has a substantial existence; because attributes cannot exist without substance. The existence of a spiritual nature, substance, entity, or person, is evident from the existence of spiritual attributes and activities, as known to the consciousness directly, and not through the senses. We do not know the essence of matter, but we know there is a material substance, because material properties must inhere in some substance, and these properties impress our senses and give rise to our sensations. We cannot define spirit in the terms of matter, nor matter in the terms of spirit, nor can we find the equivalents of one in the other.

On its dynamic side spirit manifests force, on its intellectual side it manifests thought; or it is a personality that has the ability to think, feel and act—or the power of rational thought, moral emotion and moral action. Thought and force do not constitute spirit, but are the result of the action of spirit.

Thought is the result of the action of the intellect, and force is the result of the action of will.

It is evident from man's consciousness and experience that force is spiritual in its origin. We are first conscious of it as the result of the action of will. It is first known in volition. In the light of the conscious experience of volition we interpret the manifestations of force in nature. This is the conclusion of modern science. This conclusion is fatal to the claims of materialism. On this subject Mr. R. A. Wallace, in his "Natural Selection," says on page 368: It is not improbable that all force may be will-force; and thus that the whole universe is not merely dependent on, but actually is the will of a higher intelligence, or one supreme intelligence. The scientific doctrine of the unity, eternity, and persistence of force is explained by tracing it back to the will of God. As the unity of nature results from and is the expression of the unity of its cause, so the unity of force results from the unity of the divine will from which it emanates in acts of volition. Force is intelligent and benevolent in its action because it is spiritual and not material, and has its origin in the will of God. This fact brings into unity efficient and final causes, as the efficient cause is the divine will and the final cause is the divine wisdom, and God is one. But the fact that all force springs from the will of God as the result of an act of divine volition proves divine personality as well as divine unity, for will is a personal attribute.

As the atom of matter is a centre of force and all force results from divine volition, all matter is created by spirit; for God is a spirit. Matter is not eternal, for the molecule bears all the marks of a manufactured article; nor is it a part of the divine substance, or an emanation from God, but it is a divine creation. It has derived its being from the creative act of the divine will. It is not the infinite and absolute substance, but it is relative and dependent substance, though real and indestructible.

The materialism that affirms there is no spirit, and the idealism that affirms there is no matter, are alike untrue and impractical systems of philosophy. They both impeach the veracity of consciousness, and reject the evidence of experience. We have

an experience of the existence and relations of spirit and matter. Science recognizes the existence of both.

If they do not exist, man's consciousness deceives him, and all human experience is untrue. Spirit controls, uses, and appropriates matter, as the instrument with which it works, and the medium through which it reveals itself. Matter exists for the use of spirit, and subserves its purpose in all the mechanical operations of nature and life. God reveals Himself in the material universe. It is the garment with which He clothes Himself. In nature His thoughts become incorporated in material forms, sounds, and colors. By these He speaks to the human soul through the touch, the eye, and the ear. Spiritual beauty and harmony need matter for their expression and revelation; and moral purity needs to be seen in material vestments to impress us.

THE LABOR QUESTION.—The Rev. H. C. Cushing, of Laurel, Del., contributes the following views :

Examining the two articles that appear in the December number of *CHRISTIAN THOUGHT*, one on "The Law of Labor and Capital" by Dr. Fairbairn; and the other on "The Christian use of Wealth," by Dr. Hamilton, I find that what I would say comes, as an intermediate word, between them. Dr. Hamilton says, near the close of his article, and as one of his conclusions, "Therefore according to the principles of the Gospel all very rich men may conclude that they are so, at the expense of some of their fellow-creatures." Then, of course, in some way, "some of his fellow-creatures" have been robbed by him, and it is the simple duty of the very rich man to make restitution, and if he refuses to do so, it is the work of justice to compel him to do it. So then it is not "the abuse of wealth," "its reckless waste," "the extravagance and luxury of many of its possessors" that excite the "envy and bitterness" of the poor, but the squandering in self-gratification of what rightly belongs to them. The true men of labor are neither anarchists nor paupers. They do not propose either to beg, or to steal, they only ask that justice may be done and that right may prevail. But what is justice? what is right? If I understand the matter this is the simple

question that labor and capital have to settle between them. And the difficulty of adjustment lies not in the question itself, but in the fact that covetousness rules the hour in the camps of both parties to the question. The man who refused to divide the inheritance with his brother was covetous, and the brother who wanted our Lord to compel him to do it was covetous also; it may be, to a less extent, but covetous nevertheless; and I am inclined to think that whenever *Christian principle* becomes strong enough to compel the rich to divide, it will also be strong enough to enable the poor to cease clamoring for a division. The one party will be as likely as the other to learn the fact with which the Saviour clinches his lesson on the occasion alluded to above. "For a man's life consisteth not in the abundance of the things which he possesseth."

Dr. Fairbairn touches the very core of the dreadful carbuncle that frets "the body politic" to-day, when he says: "If we could all learn this simple but great principle of doing justice, of allowing each one to have his own; and if each one would make a just use of his own, it would temper and balance society, and it would then move on harmoniously and peacefully." This whole labor question, and every other question between man and man, turns on the two "ifs" quoted in the sentence above.

We all contend "that Christianity is the true remedy for the social unrest of this generation," and of all generations. But while Christianity continues to be "only half understood by the Church" or the world, what is to be done with the strife and confusion in our midst to-day? The indirect influence of Christianity upon the governments of the world is confessedly very great, and when the time comes in which it may be said, "The kingdoms of this world are become the kingdoms of our Lord and of His Christ," its influence will be direct and all-powerful. Till then we must use the best substitute we can find—human government. Now the great business of government is to enforce justice among men. In this contest between labor and capital if either party violates the rights of the other, the whole power of the state must be used against the transgressor. When labor violates the rights of capital the law is promptly invoked, and the roiters are dispersed or arrested; but when capital "forms a

syndicate," "pools its interests," orders "a lockout," or enters upon any combinations that deprive the laborer of work, and artificially raises the price of the necessaries of life, how is such injustice to be met? There are no men in any nation more strongly bound over to keep the peace than are the rich men of our country. If they are wise and can discern the signs of the times they will not obstruct, but aid the Government in passing just laws for the protection of the laborer, and the poor of all classes, against unrighteous combinations which have for their object an increase of wealth by oppressing the poor. To-day labor is strongly organized, and knows its rights, or rather its wrongs, for as yet the matter of rights has not been very clearly defined, and it becomes every Christian to pray earnestly to God that the leaders may have wisdom and the masses patience, that working together, this labor problem may be solved in the spirit of justice and to the mutual satisfaction of all concerned.

As I look at the question the laborer has nothing to do with the manner in which the capitalist uses his funds. If they are his own the law guarantees him the right to use them as he pleases. True the ostentatious use of wealth, human nature being what it is, is calculated to excite envy and rouse indignation, but this has nothing to do with the question of right. If the capitalist in the use of labor fails to render the men who serve him "what is just and equal," the case is against him; otherwise it is not. The wealth of the capitalist may have been obtained by piracy on the high seas, or in the slave trade, or in the scarcely less infamous liquor traffic, but in either case, the laborer has no claim to any part of it, nor to any part of the infamy that attaches to its unrighteous acquisition.

But what the laborer has a right to is, a just and fair share *in the returns of his labor*. You can never get him away from that position. He has a right to "what is just and equal." Determine exactly what that is, and the labor question is settled. The laborer must not demand more, and the capitalist should not offer less.

It is plain, therefore, that no fixed system of wages can be known beforehand to be "just and equal." The returns of the labor employed in any given case may be so great as to give too

much to the capitalist, or they may be so small as to throw the advantage on the side of the laborer. The thought that has been in my mind during all these years of labor agitation and unrest, is that small wages, say enough for a bare living, and a percentage on profits, or such an interest in the business as will make the laborer a sharer in the profits of the concern is the clew to a peaceful solution of the labor question. To this plan I know there are objections. It may be said suppose there are no profits, then the laborer must be content with what he has received, but suppose there have been losses, then the capitalist is not so badly off as he would have been had he been paying full wages.

It is not for me to outline a system for the adoption of the contending parties in this case. It is enough to say that the brain and brawn of the laboring man constitute his capital, and he has as much right to insurance and a fair per cent. on his investment as the capitalist has on his outlay.

DR. HODGE'S OPINION.—The excellent paper of Dr. Rankin, which will be found in this number, was by request, read also at the Sunday noon meeting of ministers at Saratoga. Dr. N. A. Hodge was present and expressed his agreement with the author, his admiration of the manner in which he had done his work, modestly adding: "I feel instructed and profited by hearing it." We quote this, partly to pay a tribute to Dr. Hodge himself, who seemed so nearly to realize the ideal of the theologian, an ideal so graphically presented in Dr. Rankin's delineation of St. Paul.

A BRAHMIN'S TESTIMONY.—A striking testimony, recently borne by a learned Brahmin, in the presence of two hundred Brahmins, official students and others, has just been published:

I have watched the missionaries and seen what they are. What have they come to this country for? What tempts them to leave their parents, friends, and country, and come to this, to them, unhealthy clime? Is it for gain or profit that they come? Some of us, country clerks in government offices, receive larger salaries than they. Is it for an easy life? See how they work,

and then tell me. Look at the missionary. He came here a few years ago, leaving all, and for our good ! He was met with cold looks and suspicious glances.

He was not discouraged; he opened a dispensary, and we said, "Let the pariahs (lowest caste people) take his medicine, we won't;" but in the time of our sickness and our fear we were glad to go to him and he welcomed us. We complained at first if he walked through our Brahmin streets; but ere long, when our wives and daughters were in sickness and anguish, we went and begged him to come—even into our inner apartments—and he came, and our wives and daughters now smile upon us in health ! Has he made any money by it ? Even the cost of the medicine he has given has not been returned to him. Now what is it that makes him do all this for us ? *It is the Bible !* I have looked into it a good deal in different languages I chance to know. It is the same in all languages. The Bible ! there is nothing to compare with it, in all our sacred books, for goodness, and purity and holiness and love, and for motives of action. Where did the English people get their intelligence and energy and cleverness and power ? It is their Bible that gives it to them. And they now bring it to us and say, "That is what raised us ; take it and raise yourselves." They do not force it upon us, as did the Mohammedans with their Koran, but they bring it in love, and say, "Look at it, read it, examine it, and see if it is not good."

DR. CALDERWOOD ON EVOLUTION.—That British thought, says the *Christian Commonwealth*, London, is arriving at a transition period has just been powerfully demonstrated by a high authority. Savants of different schools will acknowledge the weight attaching to the opinions of such a thinker, lecturer, teacher, and writer as Henry Calderwood. This learned Edinburgh professor has, in a most interesting essay in a late number of the *New Princeton Review*, proclaimed his conviction that the reign of the evolution idea is near its close. Professor Calderwood remarks of the whole sensational or experiential philosophy that it has gained largely in popularity because it has connected itself with the evolution theory. He adds in a very

striking sentence that he is unable to regard it otherwise than as a passing though prominent feature of nineteenth century thought. Such a deliverance as this from one of the very highest authorities on modern metaphysics is a sure sign that a fresh era of scientific sentiment is very near, and that evolutionism will presently be seen receding on an ebbing wave.

Those who do not specially follow the progress of modern thought are but little cognizant of the extent of sectarianism in philosophy. Sectism is not a hindrance to religion only. Christians have no monopoly of division. Denominationalism is even stronger among the opponents of Christianity than amongst its friends. Leaders rise and fall. Followers go dividing after this theorist, then after that. The evolutionists have been claiming the prerogative of philosophic infallibility. They are but a set of philosophic thinkers after all. One subdivision of them have made of Mr. Herbert Spencer a pope which he never dreamed of becoming ; and now as Dr. Calderwood observes, Spencer's influence is visibly declining as Mill's has very palpably been doing for years.

ENCOURAGING.—In 1813 Protestantism in France did not count 150 pastors, and had not a single establishment of charity, education, or evangelization. That Church has now 900 pastors, 37 homes for orphans, 42 retreats for the aged, two convalescent reformatories for prisoners, besides asylums for the blind, deaf and dumb.—Every vessel in the English navy now has daily prayers, and regular services on Sunday.—The Gospel is preached in the United States by members of the Lutheran Church in thirteen different languages.—*The New York Observer* says: “The churches of all denominations in South Carolina, since the earthquakes, have had a harvest of new converts. About 1,000 persons have united with the Presbyterian churches during the winter.”—Nine Protestant denominations are engaged in missionary work in Mexico. They have planted at least twelve Protestant churches in the important cities between El Paso and the City of Mexico.—In the four years of Southwest Kansas Conference the membership has increased from 3,000 to 15,000. The territory covered is 100 miles

wide and 230 miles long, and has a population of 350,000.— According to President Hitchcock, of Union Theological Seminary, there are now 142 theological seminaries in this country. In the eighteenth century there were but 3. Within fifty years 111 have been founded, an annual average of over 2.— There are in the State of New York 43 Baptist associations, 864 churches, 786 ordained ministers, 117,249 members, 786 Sunday-schools, 1,785 teachers, 10,061 scholars; contributions last year, \$1,374,610; value of church property, \$9,113,551.— Fifty years ago it was a capital offence for a Chinese to be a Christian; now you can preach the Gospel with more liberty than in many places in Europe.

MONTHLY MEETINGS.

AT the regular Monthly Meeting held February 3d, 1887, the President, Rev. Dr. Deems, presided. The devotional exercises were led by the Rev. H. B. Hudson. The Secretary, Mr. Charles M. Davis, being too ill to attend, the Hon. A. B. Conger was appointed Secretary, *pro tem.* The minutes of the January Meeting were read and approved.

It was announced that the Executive Committee had resolved to start a circulating library of the bound volumes of *CHRISTIAN THOUGHT*. In each volume the following is printed:

“This book belongs to the Circulating Library of the American Institute of Christian Philosophy. It is circulated by money donated for the purpose by [here the name of the doner is inserted].

“The only return asked of you for the use of this volume one month is, that you shall then, if not earlier, lend it to some other person and mail a postal to the Institute, 4 Winthrop Place, New York, saying, ‘I have put *CHRISTIAN THOUGHT*, Vol. — in the hands of [insert name of person and his address].’ Then sign your name and address, and date.

“Perhaps you will contribute to the fund for thus circulating good books. Five dollars will set in motion four volumes like this which may be read by hundreds and engage them in this

method of Christian activity. Make your remittances to the order of Mr. Charles M. Davis, Secretary, 4 Winthrop Place, New York."

To begin this enterprise contributions had been made by Rev. Alexander Mackay-Smith, Prof. James D. Dana, Rev. Dr. Deems, Mr. William O. McDowell, Rev. Dr. Bradford, and Mr. L. P. Tibbals. Twenty-eight volumes have been put in circulation: Contributions to this good work are earnestly solicited.

The following were announced as having become members since the January meeting:

Robert A. Lamberton, LL.D., President of the Lehigh University, Pennsylvania; Robert Rogers, Esq., office editor of the *Scientific Arena*, of New York; Major Z. R. Pangborn, A.M., editor of the Jersey City *Evening Journal*; Samuel T. Lowrie, D.D., of Philadelphia; Rev. Stephen H. Granberry, of Newark, and Rev. Dr. Wm. F. Junkins, of Charleston, S. C.

The paper of the evening was delivered by Dr. A. Wilford Hall, editor of the *Scientific Arena*; the subject was "The Substantial Philosophy." It was discussed by Mr. Boucher, Mr. Wilder, and Dr. Henry A. Mott.

THE sixth monthly meeting was held in the rooms of the Institute on the evening of the 3d of March, 1887. The President, Rev. Dr. Deems, was in the chair. Devotional exercises were conducted by Rev. F. A. Wilber, Jr. The minutes of the February meeting were read and approved.

The following were announced as the names of the members who had joined since the February meeting: Rev. George W. Briggs, editor *Texas Christian Advocate*, Galveston, Texas; Mr. George L. Van Emburg, N. Y. City; Mr. Richard Grant (Life Member), Jersey City; Mr. Thomas E. Stewart, N. Y. City; Rev. D. D. Lowery, Manheim, Pa.; Mr. David K. Elmen-dorf, Tappan, N. Y.

The President announced that it had been arranged to have the Tenth Summer School of the Institute at Key East, to begin on Tuesday, August 16th, and continue until Thursday the 25th, and that the following gentlemen had consented to deliver lectures,

namely: Rev. Dr. Lyman Abbott, editor of *The Christian Union*; Rev. James F. Riggs, of Bergen Point, N. J.; Rev. Dr. Hopkins, President of Emory College, Oxford, Ga.; Rev. Dr. James T. Bixby, author of "Similarities of Physical and Religious Knowledge," Rev. Dr. A. H. Bradford, Montclair, N. J.; Prof. Alexander T. Ormond, Ph.D., Princeton, N. J.; and Thomas Hill, D.D., LL.D., Ex-President of Harvard University. The President also announced the death of the Rt. Rev. Bishop Green, of Mississippi. This venerable prelate departed this life on Sunday, 13th February, at Sewanee, Tenn., the seat of the Southern University, in the establishment of which he had had so large a share. Bishop Green was one of the earliest members of our Institute, and for years has been one of the Vice-Presidents. Dr. Deems paid a glowing tribute to his memory, as a gentleman, a scholar, a Christian, and a devoted Bishop. He and Bishop Green had been colleagues in the faculty of the University of North Carolina and this enabled him to speak knowingly of his departed friend's excellencies.

On motion of the Hon. A. B. Conger, seconded by Rev. Mr. Dows, assistant rector of the Church of the Redeemer, New York, the Secretary was requested to insert a minute of this announcement in the proceedings of the Institute and to forward a copy thereof to the family of our late eminent Vice-President.

A paper was read by Prof. Daniel S. Martin, on "Christian Evolutionism and its Bearing on Religious Thought," which was discussed by several gentlemen, and requested for publication in **CHRISTIAN THOUGHT**.

The meeting then adjourned.

OUR LETTER BOOK.

AN IMPORTANT REPLY.—In reply to the question of indorsement, the officers of the Institute call your attention to the repeated announcement that the Institute is not responsible for the views set forth in any of the Lectures and Papers; but that each gentleman is responsible for his own productions. The Institute does not indorse evolutionism because it invites Prof. Winchell to read a Paper; nor Idealism, because it invites Prof.

Bowne; nor Realism, because it invites Prof. Wilson; nor Substantialism, because it invites Dr. Hall. The Institute is not a debating society. The officers would invite no man who did not "profess and call" himself a Christian. In the Institute the question of the supernatural origin of Christianity is never to be discussed for one moment. No one is invited to give a Lecture or Paper who is supposed to have any doubts upon that subject. The name of the Institute and its published objects plainly set forth that that is taken for granted. The truth of the Holy Scriptures is assumed in the first of the objects set forth in our prospectus; and our business is to investigate fully and impartially the most important questions of philosophy and science, giving preference to those which especially bear upon revealed truth. There may be two sides to a scientific question. What we wish to do is to ascertain the truth in the premises, and then to inquire how far they aid men in the understanding and acceptance of this truth.

RT. REV. BP. COXE: With the prayer of my heart that the "Institute"—worthy of Alexandria in the days of her Clement—may help to *Christianize* the "Scientists" of *our* days, I beg to remain, ever faithfully yours.

BISHOP HENDRIX, of Missouri, writes: I have just finished reading the May-June number of *CHRISTIAN THOUGHT*, which I find awaiting my return after a month's absence on the varied calls of the "General Itinerant Superintendency." The fresh, invigorating articles are more welcome than ever, as we feel the need of a mental tonic after the necessary interruption of travel. I have yet to read a single number which did not do great credit to the American Institute of Christian Philosophy. The cast of the articles is really more philosophic as a rule than those of the Victoria Institute.

PROF. NOAH K. DAVIS, University of Virginia: My best wishes are with you in all your efforts to promote sound philosophy, and a wider interest in reasoned truth. *CHRISTIAN THOUGHT* seems to grow steadily better.

ABOUT BOOKS.

[In this department we shall make mention of recent publications, especially those in the line of our studies. There will not be space for extended review. The name of the book, its publisher, and its price when known, together with a brief statement of its drift will probably meet the demands of our readers. Any book mentioned will be sent post-paid, on receipt of price, by WILBUR B. KETCHAM, 71 Bible House, New York.]

"THE SELF-REVELATION OF GOD" is an 8vo of 570 pages, by Rev. Dr. Samuel Harris, Professor in Yale University (Scribner's Sons. \$3.50). It embarrasses one to mention a book like this in CHRISTIAN THOUGHT on account of the limited space we have in this department. Four years ago Dr. Harris issued his volume called "The Philosophical Basis of Theism;" a book of extraordinary ability and at once assigned its proper value. The object in that book was to ascertain man's capacity for receiving a revelation of God; perhaps otherwise to be stated as an examination of the personality of man to ascertain his capacity to know and serve God. This volume connects its line of thought with that of its predecessor. It comes to the problem of the existence of God from God's side. The theistic idea did not have its origin in man; it is not the production of pure thought; it begins with God and not with man, and so gives man the idea of a God just as external nature imparts to man a knowledge of itself, the knowledge of the external world, not being a creation of pure thought. This is all we can say to give an idea of a book which must be read, and which when read, in our opinion, will be assigned by the most competent and candid scholars to the front rank of modern philosophical and theological literature. Indeed, we doubt whether any book has appeared in this century surpassing this work of Dr. Harris, in real intellectual power and permanent value.

"REALISTIC PHILOSOPHY DEFENDED IN A PHILOSOPHIC SERIES." This is the title of the latest work of President McCosh; and, take it all in all, it appears to be the work for which thinkers will be the most indebted to its venerable author, great

as he had made their obligations before the appearance of these two volumes. The first volume is expository, the second historical and critical. No writer will produce 650 pages without giving many things from which he will expect other thinkers to dissent. But taken all together we believe this latest work of Dr. McCosh will win larger favor than any of his other productions. Our space does not allow any full analysis of books; the title and the name of the author of this work will be a sufficient guarantee of its value to any who wish to know what Realism is and what is its place in the various philosophies. We simply note one point that gratifies us, namely, Dr. McCosh's treatment of "development." The substitution of that word for "evolution" by thinkers and writers who believe in God will do much to clarify the whole subject and to redeem what is true in the so-called theory of "evolution" from what is false in it. Dr. McCosh's criticism of the phrase "natural selection" while brief is clear. The phrase "natural selection" is made up of two contradictory terms. Selection can never be made by anything that is not mind. Selection involves perception, comparison, judgment and decision, and whosoever can perform these mental acts is a person, for these are the characteristics of personality. That an unthinking thing can think, a mindless piece of matter compare, a dead inorganism decide, is sheer nonsense. The phenomena which suggest the phrase "natural selection" are the phenomena in matter which point back to mind. A mere vegetable no more selects than a rudder guides a ship. It is not the rudder, it is not even the hand of the helmsman on the rudder; it is the intellect of the person behind the hand that does the steering of a great steamer. So wherever there is natural selection there is mind, and unless we choose to endow the material universe around us with intellect, and by making everything matter obliterate the distinction between matter and mind, there is no such thing as "natural selection." Some mind selects and by its operation on matter we discover the selection. (The work is published by Charles Scribner's Sons.)

"INTRODUCTION TO PSYCHOLOGICAL THEORY," by Borden P. Bowne, Professor in Boston University (Harper & Bros. 8vo, 329 pages. Price \$1.75).

In judging this book it will be fair to understand its aim. It is not intended to be an exhaustive treatise on psychology. Its name tells its purpose: it is an introduction of psychological theory, and nothing more. It does not pretend to give the details or the literature of the subject. It is simply to set forth an understanding of the principles of psychology. Very little at-

tention is given to physiological psychology. It will be found, like everything else form the pen of the author, clear, bright, and stimulating. We commend it as a beginning book for intelligent persons who desire to know the first principles of the science of mind.

“THE ANTE-NICENE FATHERS, VOL. VIII.” (The Christian Literature Company, Buffalo, N. Y.). Volume VIII. completes the series of this superb library. This is a princely volume of over 800 pages. It is worthy of its place as the last, and successfully crowns the noble American Christian enterprise to put within easy reach of our ministers and laymen the writings of the Ante-Nicene Fathers, desirable but hitherto quite inaccessible because of the number and cost of the 24 volumes published not at home but across the seas. This volume is worthy of its place not only as the last and largest of this library, but also because of the variety and importance of the subjects treated. These subjects have involved great practical issues, and challenged repeated and earnest discussions which could be but poorly appreciated hitherto by the average reader, but which can now be readily watched and weighed by every minister and layman who has invested the slight sum of three dollars and performed the pleasant task of reading the original writings carefully translated and admirably printed and beautifully bound in this eighth volume.

R. B. W.

“REST DAYS IN JOURNEYS ABROAD.” This is the title of a choice little volume of sermons. The author, Rev. Dr. Phelps, needs no introduction to the Christian public. He is already well and gratefully known by his interesting book of travels in Europe, Egypt, and the Holy Land, and by his sweet hymns of praise found in the various hymnals and sung by unnumbered worshippers at home and abroad. This beautiful book contains nine select Sermons, together with a brief Introduction, and Prefatory Notes. These sermons were preached on sea and land, as Dr. P. was journeying for the first or second time, “in the four quarters of the globe.”

The title (“Rest Days,” etc.) is happily and appropriately chosen, for the sermons were preached on the Sabbath days. To some of them we listened as we floated in the Dahabéh on the Nile, or worshipped on Mt. Zion in the City of the Great King; and we recall most vividly the tender and thrilling impression as he preached to us from Rev. xxi., 4, contrasting that cheerless land of “overshadowing wings” with the tearless land where sorrow and sighing shall flee away—or, in sight of Calvary,

spoke of the prophecy fulfilled concerning Him who, for us and for our salvation, trod the wine-press alone (Isaiah lxiii., 3). Most heartily do we commend this little volume of "REST DAYS IN JOURNEYS ABROAD" to the pilgrims journeying through this world and seeking a better country, even the heavenly.

R. B. W.

Messrs. James R. Barnett & Co. publish a book entitled "AMERICANS IN ROME; OR, PAUL ERRINGTON AND HIS TROUBLES," by Ray Aster. The name appears to be a pseudonym. The book is a religious novel. It is the story of a man who, having had Presbyterian antecedents, passed through the Protestant Episcopal into the Romish Church. The interest of the book lies in the picture which it draws of a gifted mind struggling in the coils of papal fallacies. It finds its disillusion in the discovery that the papal claim to infallibility not only does not rest on the authority of the Bible but does not rest even on the decrees of early councils, all such decrees being forgeries composed in the ninth century. The historical and topographical matter in the book, for which the author must have made a study on the spot, will be found as interesting as the story and probably much more useful to the reader. Altogether it is a good book to put into the hands of thoughtful young people. (Price, \$1.50.)

"REPRESENTATIVE ENGLISH PROSE AND PROSE WRITERS," by Prof. Hunt, of Princeton University, is a hand-book we can most cordially recommend to all those who wish to make a study of English prose in its historical periods, its literary forms, and its representative authors. The author has aimed to make the discussion both philosophical and practical, and we believe he has attained his purpose in preparing a book which will be stimulating and helpful to every ingenuous student of English letters as well as useful in college class-rooms.

In the department of Christian work, rather than of Christian thought, is a volume by the Rev. F. E. Clark, of Boston, called "YOUNG PEOPLE'S PRAYER MEETINGS IN THEORY AND PRACTICE," with fifteen hundred topics (Funk & Wagnalls. 167 pp. 75c.). We wish it could be read by all the laymen of all our churches. It is a good common-sense practical book.

CHRISTIAN THOUGHT.

LOGIC AND LIFE.

[A Lecture delivered before the American Institute of Christian Philosophy, August 23d, 1886.]

BY PROF. BORDEN P. BOWNE, BOSTON UNIVERSITY.

I PROPOSE a study in the natural history of belief with the aim of showing that a large and important part of our beliefs are born not of argument and abstract speculation, but of life and sentiment. These beliefs are not reached as conclusions of a syllogism, but are developed as outgrowths of life. They are there before speculation begins. We do not hold them because we have proved them ; but now and then we try to prove them because we hold them ; and in any case we insist on holding them whether we can prove them or not.

I am glad, too, to undertake this work, as I think that misapprehension here is one of the perennial sources of philosophic scepticism. The failure to grasp the true nature of belief often leads to mistaken expectations and impracticable demands, with resulting doubt and disappointment. I do it the more willingly also, as I think that unjust reproach is often cast upon our religious procedure because of this misunderstanding. We are said to be illogical, to rest upon feeling, to take things for granted and to do divers other things which are equally unsavory from a logical stand-point. Anti-religious polemics abounds in this sort of thing, and frequently good people are puzzled by it and made to believe that religion must live on especially uneasy terms with logic. Now I believe that all this is a mistake. The charge of bad logic, so far as it is valid, lies not merely against our religious procedure, but against our

entire mental procedure ; and this charge again derives all its force from a mistaken conception of mental method and the general nature of belief. Hence the significance of the study I propose.

If we were called upon to frame an ideal method of investigation it would probably run somewhat like this : Let us first find some invincible fact or principle, something which cannot be doubted or denied without absurdity, and from this let us deduce by cogent logic whatever may be got out of it. When we come to the end of our logic let us stop. In other words, admit nothing that can be doubted. Make no assumptions, and take no step which is not compelled by rigorous logic. And, above all, let no feeling or sentiment or desire have any voice in determining belief. If we follow this rule we shall never be confounded, and knowledge will progress.

Opposed to this conception of method is another as follows : Instead of doubting everything that can be doubted, let us rather doubt nothing until we are compelled to doubt. Let us assume that everything is what it professes to be until some reasons for doubt appear. In society we get on better by assuming that men are truthful and by doubting only for special reasons, than we should if we assumed that all men are liars, and should believe them only as we are compelled. So in all investigation we make more progress if we assume the truthfulness of the universe and of our own nature, and take for granted that what our nature prompts us to seek will in one form or another be found. Such are the two methods. The former believes only as it is compelled to. The latter doubts only as it compelled to. The former assumes that all appearances are false until they are proved true. The latter assumes that all appearances are true until they are shown to be false.

These two conceptions of method are seldom clearly distinguished ; indeed most investigation goes on without any definite conception of method. Nevertheless, one method or the other is always implicitly followed. All fruitful work proceeds upon the latter method ; most speculative criticism proceeds upon the former. One is often amazed at the ruin wrought by a slashing critic. Arguments are riddled, postulates rejected, assumptions

declared unfounded; until the critic seems like the genius of destruction; and the reader is left to wonder how the unfortunate author could have failed to see the terrible weakness of his work. The truth is the stand-points are different. The critic pretends to doubt whatever he cannot be compelled to believe; while the author, with all the rest of the world, takes for granted what all the world admits. We meet this opposition of method especially in criticism of religion. The critic, determined to doubt everything which can be doubted and to believe nothing which is not forced upon him, makes apparently sad havoc with religious assumptions. He makes what he calls a "trenchant arraignment" of religious teaching in general, expresses his surprise that presumably intelligent beings should be seduced by such pitiable arguments, moralizes upon the malign influence of the feelings upon the intellect, and ends by the surmise that the apparently intelligent persons who hold such views do so from unworthy motives. Yet all the while, the strife is one of method. The same opposition meets us throughout our mental life.

Which now of these two methods is right? I propose to show that the mind does not proceed by demonstration, but by a vast system of assumption and postulate, which system in turn is but an expression of our total nature, and in no way admits of rigid proof.

Returning now to the two methods, the first one mentioned seems more rigorous and thorough-going, and hence it has always been a favorite with critics and closet-philosophers. And if we were only abstract speculators without any practical interests or necessities, this ideal might be made the standard of our mental operations. But as it is, this ideal applies only to mathematics. Here we begin with self-evident intuitions, and deduce our conclusions from them with perfectly cogent logic. But mathematics is a purely subjective science and does not carry us beyond the circle of our own ideas. When we come to deal with reality the method is inapplicable, and speculatively barren. At the beginning of the modern era Descartes sought to apply this method, and began by pretending to doubt everything. At last he came down to one unshakable fact; I think, therefore I am. This was the only thing which did not admit

of doubt; and from this he could deduce nothing. The bare fact "I think" is philosophically insignificant; what I think or how I think, whether rightly or wrongly, is the important matter. From the bare "I think" Descartes could reach neither the world of things, nor the world of persons, nor the world of laws. The method was indeed very rigorous; but it left thought without an object. And in general, if we should begin by doubting everything that can be doubted, and by settling all questions in advance, we should never get under way. There are questions in logical theory which even yet are keenly debated. There are problems in the theory of knowledge which have not yet received their solution; while metaphysical puzzles swarm in every sentence we speak. It is well known that no theory of perception whatever can demonstrate that the apparent object exists apart from perception. That something not ourselves exists is certain, but that that something is identical with sense-objects is not only unproved but unprovable. The difficulty of laying the idealistic spectre is sufficient proof of this. Our world-vision is primarily an effect in us, but that the cause must be like the effect cannot be demonstrated and is in itself highly improbable. But if this be the case with the objects of perception, much more is it true of a multitude of assumptions and postulates which underlie our cognitive activity in general. This will receive illustrations further on.

Thus it appears that the first method of mental procedure is inapplicable because it would shut the mind up to itself and leave thought without any object. It is further inapplicable to the actual conditions of existence. Man is not an abstract speculator and logic-machine, but is a living being with practical interests and necessities to which he must adjust himself in order to live at all. The human mind is practical rather than speculative. It lives and acts and has experiences long before it speculates and theorizes. In its practical unfolding it adjusts itself in a measure to the universe, but in a still greater measure it adjusts the universe to itself. In so doing it makes a great variety of practical postulates and assumptions which are not logical deductions, but a kind of *modus vivendi* which the mind has established with the great world of things. The mind does

not ask whether it has a right to live, but it lives ; and in living it develops a framework of principles which represent the conditions of its fullest life. It has not time to speculate ; it assumes. It has not time to theorize ; it takes for granted. The pressure of practical existence is upon it, and it must adjust itself practically before it can attend to speculative problems. Thus, man did not begin by theories of knowledge and by routing all sceptics and agnostics ; but he began by knowing as a matter of course. No more does science begin by a metaphysical and logical theory, but it takes things as it finds them, and assumes whatever it needs to get along with them. No more did man begin by inquiring into the implications of ethical existence and by settling all the metaphysical difficulties involved therein ; but he began by being ethical and by implicitly assuming all which that implies. He did not prove that he had a right to be ethical, but he found himself such. He did not resolve the metaphysical puzzles in the notion of freedom ; but he found himself compelled to regard himself and his fellows as responsible, and hence as free. Likewise, man did not begin by demonstrating the possibility and obligation of religion and by proving that the objects and relations which it implies exist ; but he began by being religious and by assuming those objects and relations. They were implied in being religious, and he was as sure of them as he was of his religion. No one can hope to understand the mind who regards it as a logic-machine. It is a living organism with manifold interests and necessities, and without thought of logic it proceeds to assimilate the universe to them. The result is an outgrowth of beliefs which are the outcome, not of logic but of life. They are not reasoned truths, but represent the tendencies of our nature or a mental concordat with existence. These facts in the natural history of belief show that belief is by no means always born of logical contemplation, but that it is often an expression of the entire soul in which each tendency of our nature aims to assert for itself its proper field and object. The law which the logicians lay down is this : Nothing may be believed which is not proved. The law which the mind actually follows is this : Whatever the mind demands for the satisfaction of its subjective interests and ten-

dencies may be assumed as real in default of positive disproof. The fundamental outlines of belief are determined by various circumstances, chief of which are the essential interests of the mind. As intellectual, we make certain assumptions; as ethical, we make certain other assumptions, and as religious, *we* make others still. Primarily all these assumptions are but the projection upon the universe of the demands and interests of our total nature.

Let us look at this somewhat more in detail, and let us begin with the principle in the realm of cognition. As cognitive beings we desire to know. But reality as it is given to us in immediate experience is not adapted to the needs of our intelligence; and we proceed to make a goodly number of assumptions which shall make it amenable to our mental necessities. These assumptions admit of no demonstration; nor are they directly contained in the facts; they are simply expressions of our mental make or build, and derive all their validity from our cognitive interests. Reality, as it is given, is the totality of things existing and events occurring at any given moment. But this is so vast, so contradictory, so unmanageable, that we proceed to work it over and interpret it in the interests of cognition. This transformation and interpretation constitute what we call science. And how does this take place? First, we tacitly assume that this vast collection of things and events falls into fixed classes which are subject to fixed laws and are bound up into a rational system. We assume further the essential truthfulness of nature, so that the indications of all clearly determined facts can be trusted. We assume once more that nature is not only essentially comprehensible but that it is comprehensible by us; so that what *our* reason calls for to make the facts intelligible to *us* is necessary to the facts themselves. For after all, our explanations of facts always consist in saying that if such and such facts may be assumed *we* can understand how the actual facts come to be as they are. Thus back of the real universe we construct an ideal universe for its explanation; and our understanding of the real is only through the ideal.

And what is the result of this explanation and interpretation? In general the ideal universe passes for the real, while

the real universe of experience is degraded into a phenomenon or appearance. Nothing is any longer what it seems or what it reports itself to be. The light which seems to shine is really a series of waves in an incomprehensible ether which has none of the properties of ordinary matter. The sounds of the world about us are only pulsations of air. The dull clod at our feet is a series of invisible elements endowed with mysterious forces whereby they are related to every other in the universe and make their influence felt from rim to rim. The visible heavens are declared to be all a show, of which the reality is the wonder of the astronomic heavens. Nothing is what it seems. The opposition between reality as it is given and as we have learned to think of it is absolute. The difference between the appearance and the conception is incommensurable. But what assures us that these things are so? They are not given in any possible experience. The eye can give only the visible heavens; it can never reach the astronomic heavens. That strange ether whose throbings are said to be heat and light lies beyond any grasp of sense. Those atoms of whose mystic properties so many wonderful things are said transcend all possible experience. The truth is that these things, without exception, are a series of ideal constructions by which we seek to interpret the reality of experience and make it amenable to our intelligence. We insist that nature shall be intelligible, and that it shall be intelligible by us. But we do this so spontaneously, so innocently, that we regard our ideal constructions as the real, while the real as given in experience is degraded into mere appearance and delusion. Thus we seek to escape from the intolerable confusion and opacity of the real to the transparency and intelligibility of the ideal. But in so doing we have to flout the senses, distort experience and twist facts out of all likeness to themselves.

And now with what logical right does all this take place? Take again the case of the visible heavens. The facts, as given, are a few thousand points or disks of light which change their position with relation to us and to some extent with relation to each other. But we say that we cannot comprehend these paltry optical phenomena without violating all truth of appearances, flouting the plainest testimony of the senses and filling

space with tremendous suns and systems beyond all grasp of thought. But the cost of this comprehension is enormous. For the sake of understanding we turn an apparent disk of less than two feet in diameter into a body ninety-odd millions of miles away and with a diameter of over 800,000 miles. The extravagance seems outrageous. Or take the case of light; here again in order to comprehend we stuff space full of a mysterious substance unlike anything of which we have experience. It must be rare as a vacuum and more solid than steel. And when we have done all this, and have made many auxiliary hypotheses besides, we say, Now light is explained. But note the extravagance, the cost of the explanation. We create and destroy with the utmost freedom, and browbeat the universe out of all likeness to itself in order to make it intelligible to us. When we have finally made things intelligible to us, then we assume that we have reached the reality as it is. So long as it is unintelligible we will not allow its claim to be real. But what right have we to do all this? Suppose we cannot otherwise comprehend the facts; what of that? Perhaps the universe does not care to be comprehended, and is opaque to intelligence. Or supposing it comprehensible, it may be such only to some transcendental intelligence and may remain impenetrable to ours. To be sure we cannot deal with the facts without the assumption of law, but what right have we to deal with them? We could not understand the facts without assuming an intelligible order, but what right have we to understand them? We could not interpret the facts without transforming the data of experience into something utterly unlike themselves, but what right have we to interpret them, especially by distortion? We certainly make very free with facts when we twist them out of all likeness to themselves in order to gratify our desire to understand. Why not take things as we find them and be content. When we come to talk of religion the scientist often turns positivist and professes that he knows of nothing but phenomena; but he is perpetually talking of things which eye hath not seen nor ear heard, and which never can be revealed to flesh and blood. A strict phenomenism would take things as they are given and would make no additions; and, from the atomic theory up to astronomy, theoretical science would disappear forever.

If now we ask for the source of this theoretic activity we must find it in the living interests of our cognitive nature, and not in the facts. The facts are indifferent alike to comprehension and non-comprehension. But we seek to comprehend as a matter of course ; and take for granted that we have a right to comprehend, that the universe is comprehensible, and that we are able to comprehend it. The assumptions we make are so natural that they do not even seem to be assumptions at all ; we even call them intuitions at times ; but in truth they are pure assumptions which represent primarily our mental build and our cognitive interests. That we desire to comprehend the universe does not prove that the universe is comprehensible. Our wishes cannot determine reality. Indeed we do not even know that there is a proper universe. Reality as it is given shows some order, but not much. For the most part events form a chaos in which no rational system can be discovered. That conception of a crystalline order of law which embraces all events in one system and which is transparent to reason, is purely a subjective ideal and is not known to be an objective fact. The comprehensible universe is as pure an assumption as the religious and moral universe. Moreover, the actual universe, that is, the universe as it is given to us, is not intelligible ; it is that other assumed ideal universe which we have put behind the real universe which is intelligible ; and that is intelligible because we made it and put it there. From a logical and critical stand-point that intelligible universe is purely an idol of the human tribe, being but a projection upon the world of reality of the subjective interests and postulates of the cognitive faculty. Nevertheless we insist upon making the assumption of a rational universe, because the admission of an essentially irrational and incogitable reality violates our cognitive instincts, throws the mind back upon itself without an object and without meaning, and leaves it a prey to scepticism and despair.

And here it would be in place to construct a refutation of science after the fashion of the familiar refutation of religion. We need only demand that the scientist prove his postulates and demonstrate his assumptions to put him in a sad plight. First, let him settle with the philosophic sceptic. Second, let

him rout the agnostic. Third, let him put the idealist to flight. Fourth, let him prove that a system of law exists in objective fact. Fifth, let him show that what is necessary to his comprehension of the facts is necessary to the facts themselves. Sixth, let him clear up the difficulties in his own metaphysics. Let him begin, say with action at a distance, and explain to us how an atom can act across the universe with no go-between. Let him also give us some light on the existence and nature of those atoms of which he says such odd things; and in particular let him clear up the matter of that solid void, the ether. Seventh, let him show that our desire to have the universe comprehensible proves that it is so; or that our unwillingness to admit the irrationality of the universe is any argument against it. Let him remember that feeling, desire, sentiment prove nothing. Eighth, let him remember also that the scientific interest which is so strong in him is very limited indeed. Most people continue to get on very well with a knowledge of appearances, and have not a shadow of interest in those theoretical constructions which to him seem of such transcendent importance. It must therefore be regarded as the extreme of arrogance on his part to seek to impose the tenets of his little sect upon the universe as necessary laws of the same. When all these demands have been met there can be some talk about science, but not before. As long as the sceptic and agnostic are abroad there is no security that his science is not all sheer fiction. As long as the idealist is not silenced, it is doubtful whether even the objects of his science exist. If the existence of the system of law is not established, his deductions therefrom are worthless. Until he proves that what he needs to understand the facts is necessary to the facts themselves, all his theorizing is but a projection upon the outer world of his own mental nature, and in no way an apprehension of objective reality. And as for his metaphysics, that is well known to contain difficulties equal to any in theology. Now, I say, before we talk about science let it be proved that there is or can be any such thing as science; and above all don't let us begin to teach science when it is very far from made out that there is any science whatever. Of course this is not the method which sci-

tists follow. So far from having answered these questions most scientists are not even aware of their existence, but go on serenely talking and teaching science and making their living by it when every competent critic knows that it is very doubtful whether there is any science at all. And if now and then one of them does attempt to deal with such questions, he always brings out some shreds of worn-out metaphysics and talks of common sense in a way to make logic scream. It only remains to declare his arguments contemptible when they are not unintelligible, and to surmise that such obstinacy in retaining the conclusion when the premises are exploded must be due to unworthy motives. Such a refutation, if well managed, could be made to seem very forcible ; and it would only be the analogue of the familiar refutation of religion. But here again the opposition is really one of method. The critic sets out by doubting everything in advance and by demanding demonstration at every step. The scientist sets out with implicit faith in the system of things and in the power of the mind to know. The one assumes what the other denies ; and there can be no peace between them until they come to an understanding on method.

But what use can we make of this? My primal contention was that there is a large element in our mental life which does not represent reasoned truths, but subjective interests and mental tendencies. It does not emerge as a conclusion in a syllogism, but is evolved in life, and is an expression of life. This claim I have illustrated in the realm of cognition because this realm is generally thought to be free from all such elements. But to our surprise it appears that our cognitive activity is full of assumptions none of which admit of demonstration and which finally rest upon our constitutional unwillingness to abdicate our own nature by admitting that what that nature prompts us to seek is ignored by reality. There is no need to illustrate the principle in the ethical and religious realm, for that it holds there is one of the perennial objections of the critics.

The sum is this: The mind is not a disinterested logic-machine, but is a living organism with manifold interests and tendencies. These outlive its development and furnish the driving power. If these were away development would cease;

if they were different, development would be different. The implicit aim in mental development is to recognize these interests and make room for them so that each shall have its proper place and object. In this way a series of ideals arise in our mental life. As cognitive, we assume that the universe is rational. Many of its elements are opaque and utterly unmanageable by us at present; but we assume spontaneously and unconsciously that at the centre all is order and that there all is crystalline to and transparent to intelligence. Thus there arises in our thought the conception of a system in which all is light and in which there is no darkness at all; a system whose foundations are laid in harmony, and whose structure is rational law; a system, every part of which is produced and illumined and maintained by the majestic and eternal Reason. But this is only a cognitive ideal. Experience yields little support to it. But we hold fast to the ideal nevertheless. The facts which make against it we set aside as something uncomprehended; and we never doubt that at last everything shall fall into harmony.

But we are moral beings too; and our moral interests also must be recognized. But it is not to be thought of that the universe should be hostile or indifferent to moral aims, as these are the highest things in it. Hence arises a moral ideal which we join to the cognitive. The universe is not only rational but righteous at its root. It is not merely an expression of the supreme reason but also of supreme holiness. Here too we set aside the facts which make against our view as something not yet understood. This is especially apparent in dealing with the problem of evil. If we only wanted a causal explanation of the facts, a complete indifference to both good and evil would be the most promising account; but the race has always insisted with the tenacity of a life-struggle upon an explanation which should save the assumed goodness at the heart of things.

Finally, we are religious, and our entire nature works together to construct the religious ideal. The intellect brings its ideal, and the conscience brings its ideal; and these together with whatever other thought of perfection which we may have, are united into the thought of the one perfect being, who is the ideal of ideals, who is the perfect and complete, God over all and

blessed forever, to whom heart, will, conscience and intellect alike may come and say, Thy kingdom come, Thy will be done. Here as in the previous cases we do not ignore the facts which make against our thought; but we set them aside as things to be explained, but which must not in any way be allowed to weaken our faith in the ideal.

Now all of these ideals are primarily alike subjective. They are produced indeed under the stress of experience, but they are not transcripts of any possible experience. That transparent universe of the reason is as purely a mental product as that righteous universe of the conscience or as the all-perfect ideal of religion. The desire to find the universe intelligible is as subjective as the desire to find it moral. The desire to comprehend is as subjective as the desire to worship. In each of these cases the mind appears with its subjective ideals and demands that reality shall recognize them; and in all alike reality recognizes them only imperfectly. To some extent the system of things is intelligible; but for the most part unintelligible. The power not ourselves also makes for righteousness to some extent; but there are many obvious exceptions. Likewise the God in whom we believe is to some extent revealed, but for the most part clouds and darkness are round about Him. The assured conviction we have in all of these cases rests upon no logical deduction from experience, but upon the optimistic assumption that the mind has a right to itself, and is at home in the universe. The notion of a universe essentially incogitable is rejected because it violates our cognitive interests and leaves thought without an object. The notion of an immoral universe is rejected because it makes our moral nature an absurdity. The notion of a godless universe is rejected because in that case all our interests, mental, moral, and religious, must sooner or later fall into ruin. And the opposite conceptions are held primarily because we cannot escape utter mental and moral confusion without them. This is to be sure an act of pure faith, but it is an act upon which our entire mental life depends. The driving and directing force of the mind does not lie in logic but in its own living and perennial interests. Science, ethics and religion all alike are at last built upon these and upon postulates drawn from them.

From this survey of the facts I conclude that a purely speculative knowledge of reality which shall be strictly deductive and free from assumption is impossible. Not only the just, but the wise also shall live by faith.

And now it is high time for the agnostic to appear and say that this has been his view all along. Our science as well as our theology is only a subjective dream and has nothing in it. It is the last, and in some respects, the fairest of those anthropomorphic dreams of which the human mind has always been so prolific. For immature minds, or for a certain stage of social development, it has doubtless been valuable and even necessary; but the critical intellect in its stern devotion to truth fails not to see that science also must go. Of course it costs us many an exquisite pang—the deepest indeed of which our nature is capable—to give up the fair, sweet vision of an intelligible universe; but loyalty to truth is dearer still. We must nerve ourselves, therefore, to see our last idol smitten into dust by rigorous and relentless logic. This does seem very conclusive when abstractly considered, and I can conceive that a closet-philosopher should so heat his brain over it as to fall into a philosophical swoon. In fact, however, it is rather tiresome. In short, universal scepticism is practically none. Being impartially distributed over the whole mind and the entire field of knowledge, it leaves everything just where it was before. The really and only dangerous scepticism is one which discredits one side of our nature in the name of another, as when religion is ruled out in the name of reason, or science is played off against conscience. But the universal scepticism not only leaves the mutual relations of faculties undisturbed, but it has the unshakable faith of the mind in its own nature against it. And albeit a half-way sceptic is a sorry sight, there has never been a consistent agnostic. The might of the actual, the living force of our mental nature have always forced him into pitiable inconsistencies. This is so much the case that the professional agnostic has generally confined his agnosticism to religion or to such things as he has found disagreeable. As a rule when he says, We know nothing, he means, You know nothing. For himself he, like other speculators, gives us theories of things in which he has unbounded

faith. He writes systems of evolution, and even deduces the universe without ever showing the least suspicion that he is not in the very kingdom and palace of truth. So long as the agnostic is inconsistent he may be left to himself; and whenever he becomes consistent he may still be left to himself.

But you will say that is no answer to the agnostic. You leave him in possession of the field. Why don't you reason out a disproof? Nay, but I fear I have had my labor in vain; for the aim of this paper has been to show that these things admit of neither proof nor disproof. I aim to destroy knowledge to make room for belief. I am not seeking to refute the agnostic; but to describe certain facts of mind and mental procedure. As in external experience there are many facts which we do not deduce but find, which we do not invent but discover; so in mind also there are certain facts which are not deduced but found; but they are none the less real and none the less potent as facts than they would be as deductions. And one of these facts is that the mind has faith in itself and in the system of things, and that the basal interests and sentiments of the mind furnish both the guiding and the driving force in mental development. This is, to be sure, an act of faith, but we cannot avoid it unless we are willing to stand before our experience as helpless as a Bushman or a Papuan before an eclipse. If one chooses groundlessly to abdicate his nature and profess doubt of all things, no logical injunction can be placed upon him; but we certainly are not called upon to regard the performance as a very brilliant piece of dialectics; and in the nature of the case further argument is impossible. But if he be left carefully to himself and not encouraged to think of himself more highly than he ought to think, the might of the actual and the cooling, sobering influence of reality will in time make themselves felt and get themselves recognized.

And these interests get themselves recognized, and they all get themselves recognized. As long as man remains man there will be science and conscience and religion. The sceptic will stand without, like Sanballat when Nehemiah was building the temple, and will summon the builders to come down and prove that they have any right to build a temple, or that there is any

temple; and they from within will answer, as did Nehemiah, We are doing a great work and we cannot come down. From the beginning the philosophic-sceptics have raged and have imagined many bright, and more vain, things; but the burden of the cry has always been "you cannot prove that you have a right to do what you are doing." But this perfectly barren doubt has been ignored, practically by common sense, and theoretically by earnest thinkers, who, having once admitted that it is always abstractly possible, and having seen that it is eternally empty, imitate priest and Levite and pass by on the other side. Whether it has a right to or not, the mind is sure to conceive the universe so as to provide for its own interests. So long as any fundamental interest is overlooked or ignored there can be no peace. Sometimes the intellect has taken things too easy, and has satisfied itself with simple and compendious explanations which left no place for heart and conscience; ran off into dry and barren atheisms and materialisms. But before long the rising tides of moral and religious feeling have poured over their barriers and, sweeping them away, compelled the intellect to find a new explanation which should include all the facts. On the other hand religion has often made the mistake of denying intellect and conscience their full rights. It has taken up absurdities, stupidities, contradictions, immoralities into its creed; and then both intellect and conscience have begun their crusade for recognition. Conscience alone has proved a sturdy disturber in theological systems, and one great source and spring of theological progress has been the need of finding a God whom the heart and the conscience could worship. Some of the finest systems from a logical point of view were so unfortunate as to overlook this fact. They contained propositions about God and His ways which were not compatible with goodness; and when that was seen their day was done. To be sure there is no logical contradiction in the thought of an arbitrary and malignant deity; but so long as man remains man he will believe either in a good God or none. And I doubt not it will always be so. There is no more danger that man will permanently abdicate his nature, than there is that he will cease to perform the practical functions of life although they are not logical.

In every department of our nature, then, we live by faith, by postulate, by assumption. But this is not the blind faith of ignorance; it is the open-eyed faith of wisdom. We see that in order to live true and noble lives we must venture beyond knowledge and demonstration. We make the venture then with our eyes open; we take the risk knowing that we take it. And seeing that in any case we must venture beyond what we know, let the venture be toward the highest.

What now is the function of logic with regard to these practical postulates? Plainly, not to prove them, but to bring them and their implications out into clear consciousness, and to keep them from missing their proper aim. These postulates themselves are not primarily known as such, but exist rather as confused tendencies than as clearly defined principles. In this state they readily lose their way. Thus the scientific or cognitive consciousness is a comparatively recent development; and its implications are very imperfectly understood. What is implied in the assumed possibility of objectively valid knowledge is a question rarely asked; and still more rarely answered. Hence many have fancied that materialism, or atheism, or fatalism might furnish a basis for science; whereas any one of them would engulf science in scepticism. The ethical consciousness, in like manner, is rarely in full possession of itself; and consequently many ethical theories acquire currency which, developed into their consequences, would prove fatal to all ethics. The religious nature, also, is developed into self-possession only by a long mental labor and experience extending over centuries. Left to itself it may fail utterly of comprehending its own implications and may even lose itself in irreligious assumptions. In all of these fields, therefore, there is need of a critical faculty which shall have the regulative function of securing consistency in the development of our postulates and of adjusting their inner relations. If we assume a rational and consistent universe, we must see to it that our theories are rational and consistent. If we assume an ethical universe we must admit nothing unethical into our conception. If we assume an intelligible universe we must make no assumptions incompatible therewith. This is the field of logic; and here logic has its absolute and inalienable rights.

And in this process of inner development, adjustment and rectification, logic is equally the servant of cognition, of ethics and of religion; while all alike are fundamentally the outgrowths and expressions of our subjective needs and tendencies as evoked by our total experience.

These facts in the natural history of belief throw light on many peculiar problems in our mental history. I said at the start, that we have many beliefs which we do not hold because we have proved them, but we try to prove them because we hold them, and that we insist on holding them whether we can prove them or not. The reason is apparent; these beliefs are not born of reasoning, but of life. From this we can also understand the barrenness of purely logical criticism of fundamental beliefs. Logic did not give them and cannot take them away. The logical criticism proceeds on the assumption that everything may be doubted which is not demonstrated; and the belief itself rests on the opposite assumption that our nature is to be taken for granted in default of positive disproof. Because of these opposite starting-points the two never really collide. Again we can understand the peculiar variations of belief to which all are subject. Since the roots of belief lie in the sub-logical realm of emotion, sentiment, aspiration, it follows that our conviction will vary as the tides of feeling rise or fall. And this is realized in life. In a pessimistic state of mind when the springs of life are low, the scientist despairs and becomes an agnostic. In a similar state of mind, the moralist cries out, "Let us eat and drink for to-morrow we die." The Christian, likewise, after a period of full assurance, falls into doubt even of the existence of God. All the arguments in each case remain what they were before; the trouble is with the inner spring of faith. Nor can faith be recovered by arguing; this will often rather deepen the unbelief. Cure can best be sought by leaving nature to reassert itself, or by seeking to strengthen the sentiment from which belief originally sprang. And on the other hand, conviction grows more intense as the inner life develops; and this development takes place not through the solution of logical puzzles, but by outflanking them, not by metaphysical deduction but by surrendering ourselves to our own nature and to the system of

things in the faith that they will not lead us astray. Thus science, ethics and religion grow; and the mind in its increasing sense of self-possession and of harmony with the reality of things becomes more and more indifferent to the objections of the sceptic, and works with ever-growing faith to build up the temple of science, of conscience, and of God.

THE RELATION OF CHRIST'S MIRACLES TO CHRISTIANITY.

[A Paper read before the American Institute of Christian Philosophy, Nov. 4th, 1886.]

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IN considering this great subject we propose to show one thing, viz.: either the miracles narrated are what they profess to be, or if not, the system of Christianity falls to the ground, and its great author is shown to be only a man, born into the world as all other human beings, and we come to this conclusion from the stand-point of the interpretation of that which the four Evangelists say as to the miracles worked for Christ, and by Christ, or those connected with His person, and those pertaining to His work. Our first inquiry, then, in coming to this investigation is, How reads Matthew, Mark, Luke and John? We shall attempt to show that the supernatural and miraculous element is so intimately interwoven in these four narratives with the other facts recorded as to be impossible to be separated from them without the utter subversion of the whole system of Christianity, and consequently reducing its Author to a mere human level, and an imperfect one at that, for this reason: doctrine and miracle are so blended together, like the oxygen with the air we breathe, or the water we drink, that the separation of the supernatural element from Christianity would be as destructive to the system itself as the taking away of the oxygen from the natural element of air or water. Most truly does Theodor Christlieb, Preacher and Professor of Theology at Bonn, say: "If the miraculous be once denied, it is far

more logical and honest no longer to regard the gospels as historical, but as Strauss does, to consider them a chain of legends and fictions, and then to abjure Christianity openly. For the elimination of the miraculous element from the gospels' history can never take place without a deep penetrating injury, or even a total and destructive alteration of the entire substance of the Christian religion. What good is it to know all about the linen of the swaddling clothes which the rationalist exegete will describe so learnedly and vividly if it is no longer a divine child that was wrapped in them? What is the use of depicting the cross if it is merely an apparently dead man who is being lifted down from it? The whole foundation of our Christian religion is shattered."

If we say the four Evangelists as to miracle were mistaken, or if we say they intentionally deceived, and that Christ worked no miracles, and that none as claimed were worked on his person, can we avoid the conclusion of Christlieb that the whole foundation of our Christian religion is shattered? Must we not be compelled, on the idea no miracle was worked by Christ and no miracle worked for the *Person* of Christ, to come to the following inferences?

1. Christ is born into the world as all other human beings, and therefore is only a man, having a human nature exclusively.
2. Such a person is not infallibly true as to that which he is recorded to say of himself, and therefore may be as truly mistaken in those things which he speaks of, that do not pertain to his own person.
3. If the record is not true that speaks of the miraculous conception of Christ, then when the significant words are used, "Then Joseph her husband being a just man, and not willing to make her a public example, was minded to put her away privately," we are forced to the interpretation of the *illegitimate* birth of Christ.
4. Christ having worked no miracles, no miracles of the crucifixion ensuing in the incidents connected with the great earthquake, or the opening of the graves, or the rending of the veil of the temple, then these are to be relied upon no more as

supernatural events than the appearance of Moses and Elias at the Transfiguration, or the voice that came from Heaven saying, "This is My beloved Son ; hear Him."

5. No miracles worked by Christ, or for Christ, being true, the two great miracles recorded of the resurrection, and ascension into Heaven are not also true.

6. The miracles of Christ not being such miracles as Christ and the Apostles professed, then the predictions of the Old Testament relating to these miracles are proved false.

7. The predictions of the Old Testament as to the divine person and miracles of Christ not to be relied upon as true, then we cannot rely upon Christ's predictions as to the future of humanity and this world as true.

8. The miracles of Christ not being true, there are no miracles performed as narrated in either the Old or the New Testaments.

9. Christ having worked no miracles to attest to the truth of His divine mission, we have no valid proof of the truth of the declaration, "Who hath abolished death and hath brought life and immortality to light through the Gospel."

Such conclusions we cannot but arrive at as the logical outcome of the denial of the miracles of Christ. Let us not, then, underrate the vast importance that should be attached to the miracles of Christ as having a most intimate relation to that system of Christian truth which He taught and which underlies the whole question of Christianity itself. Says Fichte : "We and our whole age are so rooted in the soil of Christianity, and have sprung from it; it has exercised its influence in the most manifold ways on the whole of our culture, and we should be absolutely nothing of all that we are if this mighty principle had not preceded us." If this is true, then Christian civilization stands or falls as Christianity stands or falls, and Christianity is so related to the miracles of Christ that take these miracles away and we remove with them Christianity itself. To show the truth of this assertion and how the miracles of Christ are so connected with His instructions as to make both doctrine and miracle impossible to be divorced one from the other will now be the object of this lecture.

First. The system of Christianity, like every other system of belief, must have a foundation. No house is built except it be built upon some thing, and the character of the superstructure must wholly correspond with the nature of the foundation. A great question here arises. What foundation did Christ claim for that system of Christianity that in a special and extraordinary sense He introduced into the world? The question is not now whether the true religion did not exist through the ages preceding His coming into the world, but whether the true religion, taking upon itself the distinctive garb of Christianity as contrasted with Judaism, could have existed at all unless Christ could truthfully appeal to His miracles and say, "If I do not the works of My Father believe Me not." The question is, what did Christ claim to do, and what were the Jews challenged to examine into? Certainly our Saviour looked upon His miracles in precisely the same sense that our Government would look upon a person professing to come from a foreign country, and assuming to be the ambassador. The whole question at issue between that person and our Government would resolve itself into that of *authority*.

"By what authority doest Thou these works, and who gave Thee this authority?" was the searching question of the rulers to Christ; so the same question in a different form and for a different end is put to every ambassador coming to our Government from foreign lands. The ambassador shows his credentials, and if genuine the question of authority is at once settled. Now, let a person carefully examine into the superstructure of the system of Christianity. Let him examine into what it professes to do—what it promises in the way of reward, or threatens in the way of punishment; what it says as to the kingdom of Heaven; what importance it attaches to faith and repentance; what it predicts as to man's future condition in this world, or the world to come; what it says of God in his relation to man, or man as related to God, and it will be seen that Christ could not speak with authority unless He worked miracles. The superstructure of Christianity is too vast and grand in its proportions to be erected unless it was built upon the solid foundation of the supernatural in the character of Christ and the

miraculous in His works. If even Fichte could say that our modern civilization would amount to absolutely nothing had not the mighty principle of Christianity preceded it, what, we ask, could the superstructure of Christianity be with no miracles of Christ to attest His divine mission? How long would that system have outlived the crucifixion if there had been no resurrection of Christ, and no ascension of His Person into Heaven?

How could Peter or the other Apostles have confronted the Jews and the Roman legions on the day of Pentecost, if, when the question was put, Where is your crucified Christ? the only response that could be given had been, "Christ is now laid away in the grave a dead man; or, we thought Him dead when taken from the cross, but He revived to life, and by the connivance of His disciples He has fled into Galilee." But a Pentecost with no real resurrection of Christ from the grave would have been no Pentecost for Christianity. Rather the sneering words, "Did not that deceiver say, after three days I will arise again," never would have been rebutted by the disciples proclaiming the moral victories of their Master over sin before His death upon the cross. What success would have ensued to the preaching of the Gospel if it had been seen that Thomas was altogether mistaken about the person of Christ, when, putting his hand into the wounded side of the Redeemer, he exclaimed, "My Lord and my God"? Now we say the system of Christianity never could have been erected upon a Christ with no miracles, nothing supernatural in His person, or miraculous in His works. As well place the Capitol at Washington upon top of the monument of the father of his country. It is a fatal mistake, or rather objection, to those who deny the miracles of Christ, or miracles worked for Christ, when we say the system of Christianity is such, its past history and present condition, that it absolutely demanded as its credentials what Christ declared to be miracles in attestation of its divine authority, to be any system at all, or even to exist a day after the crucifixion of its Author.

Second. All our ideas connected with the real cause of modern civilization in countries called Christian, must be most deeply influenced and changed according as we credit or do not credit the miracles of Christ. In other words, those who believe

in these miracles give to them a commanding importance as underlying the great cause of the peculiar civilization that exists in Christendom as contrasted with the civilization existing out of it. Let us take some of the chief elements of its power in society and observe how at once those elements of power vanish away when we divorce the supernatural from it. Take our Lord's Supper, commemorative in every age and country of our Lord's death wherever Christianity is professed. Suppose we use this language to all who partake of the emblems of His body and His blood, "My friends, these emblems tell us all about the best man, the most unselfish man that ever lived on this earth, but it is all a mistake about His rising from the grave; Christ died the model man it is true, but just as all men die, only it was a more cruel death, undeserved, and you do right to remember the most memorable event in human history." But the question at once is raised, if Christ said "As oft as ye eat this bread and drink this cup ye do show forth the Lord's death till He come," why, if Christ never was raised from the grave, could He speak of Himself as coming again in the same body as that which He had with Him when He arose from the grave? If there was no ascension into Heaven, how could there be any descending from Heaven? If, in the first coming, death held our Lord's body in the grave, a master never vanquished, how can the second coming, even admitting any coming whatever, prove to the world the resurrection of the body from the grave? If the Master in His own person never rose victor over the tomb, what evidence is there that His servants will? Then again, not only the absence of all miracle changes at once the real import and power of the Lord's Supper, so far as the resurrection is concerned, but it also changes the real meaning of Christ's life and death. The Lord's Supper in all Christendom commemorates something more than a good example and life, even if we make it the purest and the best that ever existed on this earth. There is a relation in the sacrament of the Lord's Supper to sin and law.

The vital question that has been the procuring cause of all the essential benefits of Christianity and intimately affecting the condition of our modern civilization, is this, Did not the death of Christ secure an end far greater and nobler than that of a

good example, or a perfect model of all human virtue? Have we not in this death something attained unto that could not be reached by the sacrifice of the best of all human beings? Is not law and sin not only illustrated in the greatest object-lesson in the universe, but the only atonement given that was adequate for the demands of law and sin? Could these demands be met without a perfect substitution in the person of Christ? If we have this perfect substitution, must not its value consist in the great fact that Christ was something *more* than a man? If Christ was something *more* than a man, can we stop short of the idea of the Incarnation predicted centuries before the event by the prophets of the Old Testament? Now, whatever a person may believe upon this subject, one great fact is clear, the great power of Christianity has always rested upon the belief that Christ's life and death accomplished something vastly more, and promised something infinitely better than was in the power of any mere human life or death however sinless, either to give or to promise. Underlying all Christian civilization, as most intimately affecting its past and present condition, was and is now the firm persuasion with vast multitudes of persons that if Socrates died as a martyr, Jesus Christ died as the *Son of God*. But there is another institution in Christendom universal in all ages of the Christian Church. This is the momentous formula of pronouncing in baptism the name of the Father, and the Son, and the Holy Ghost. Now, there are two great questions all persons naturally would ask when they look upon the performance of the sacrament of baptism. The first question is this, Would not the association on an equality and so intimately of the name of the Son with God the Father, and God the Holy Spirit, be the height of presumption had not Christ given the ample credentials of miracles in attestation of His rightful authority to institute this sacrament for the Christian Church? Our second question is this, Would it not be to the last degree inconsistent with that which constitutes divine worship to seat Christ upon the mediatorial throne—make Him the author of our redemption, and associate thus His name as one with God—unless Christ was *all* that was declared of Him in the Old and New Testaments? If we take up with the miracle, must we not also

take up with the doctrine? or if we take up with the doctrine, must we not also credit the miracle? Divorce the miracles of Christ from the teachings of Christ and how can we as enlightened persons make use of the formula of Christian baptism? If Christ was crucified upon the simple ground that He declared Himself the Son of God, so that the high-priest rent his clothes saying, "He hath spoken blasphemy: what further need have we of witness?" And if by the Mosaic law we read the words, "And he that blasphemeth the name of the Lord he shall surely be put to death," so that the Jews who put Christ to death could plead as an authority for this the law of Moses, especially when the momentous words were uttered by Christ, "And ye shall see the Son of Man sitting on the right hand of power and coming in the clouds of heaven," then admitting Christ true in all that He declared of Himself and the Jews guilty of the murder of Christ must we not in all logical consistency also admit that the formula of baptism asserts nothing more than the truth, when in thus associating so intimately the name of Christ with that of the Father and the Holy Ghost, it declares with equal truth the great fact of the miracles of Christ, and the greatest miracle of all that of His divine Person?

Third. There is another institution observed in all Christendom that has a most vital meaning and deep significance. This institution is Christmas day, the commemoration of the birth of Christ. No one will question the truth of what Fichte has said as to the power of Christianity in moulding our Christian civilization. Now, here the point of our argument to show the relation sustained by the miracles of Christ to the system of Christianity is this: On the supposition that Christmas day commemorates only the birth of a mere human being, and that there was nothing supernatural in the origin of Christ, how happens it that not only such an importance is attached to the nativity of Christ, but that for over eighteen centuries the belief has been that Christ did not come into this world as other human beings? How happens it a belief so universal, and with it an influence so mighty, all arising from mere superstition? This superstitious belief has lived, and still lives; it underlies most of our systems of education in schools and colleges. It exists as a most potent

factor in all our missionary enterprises over the world, and inspires the sacrifices made for most of our benevolent associations for the relief of the destitute and the suffering in society, and yet we are told this is all superstition, and that the mistake is as great as to Christ's birth as it is to His death and resurrection. We hear the exclamation, Nothing supernatural about the person of Christ! No miracles were ever worked for Him, or worked by Him! Why this absorbing interest about the manger and the swaddling clothes ; about Bethlehem and Mary and Joseph ; about the wise men of the East, or the flight into Egypt of the parents with their Infant ? But all this absorbing interest in the nativity of Christ, not only when Christ was born but ever since through the long centuries of the Christian era is not explained by saying Christ was a most remarkable Child, or that the Jews placed a most extraordinary estimation upon all the circumstances connected with His birth, and were strengthened in their belief by the glowing predictions of their prophets: the question comes home to us, Why were these predictions so astounding in the claims connected with the Messiah that should come into the world ? Why is our modern Christian civilization so built upon the idea that the infant Jesus was a *divine Child* ? Why does Christendom date all the centuries from the *birth* of Christ ? If that Child was the Child of poverty ; if His human life extended only to thirty-three years ; if death came and claimed the body of the crucified One, and that body never rose from the grave—why, then, this unaccountable interest in the nativity of an Infant that grew up to be only a man ? Miracle or no miracle, one thing is certain, all the value of the nativity of Christ in the belief of Christendom rests upon the fact that this Christ is looked upon as *more* than a mere human child. Upon thus firm persuasion the whole system of Christianity is built.

Fourth. There is another fact universally confessed in Christendom as the chief cause of the power of Christianity, and which underlies the real progress of all Christian civilization. This is, that not only the commencement of Christianity in the person of Christ in the reign of Cæsar Augustus is confessed to be supernatural in its origin, but also in its progress, its victories,

even as in its consummation. Confining our thoughts only to the past and present of Christianity we are compelled to arrive at this conclusion: Either we have as to its origin, progress, and consummation Christianity and the supernatural, or no Christianity and no supernatural. One cannot be divorced from the other, and yet either miracle or Christianity survive this violent disruption. This will be seen when we ask the question, What does Christianity profess to be in its origin, continuance and consummation? Does history, so far as the past and the present, favor the idea of Christianity without miracle? There is one fact in history that has found an home not only in the Bible, but uninspired productions. This fact is Babylon in its highest civilization and Nebuchadnezzar, the great monarch of Chaldea. What was prophecy with Daniel six hundred years before Christ has become a matter of history since his day. And we propose to present but two ideas connected with his predictions. *First.* The development of the world powers, or kingdoms of Babylon, Persia, Greece, and Rome, and the supplanting of one power by another—Persia conquering Babylon; Greece, Persia; and Rome, Greece, represented by the gold, the silver, the brass and the iron, part clay and part iron.

Second. The development of the great spiritual power that was to arise in the Roman Empire, the direct opposite of the world powers of gold, silver, brass and iron. Now, the great point of inquiry is this, Was the origin of the kingdom of the stone, said to be cut out of the mountain without hands, the same with the world kingdoms of Babylon, Persia, Greece and Rome? Either this origin was the same, or it was not. If it was the same, then Christianity as a system, or the development of the great spiritual power to arise in the Roman Empire, must as a system be only natural in its origin, natural alone in its progress and simply an evolution of the civilization of earthly powers. It is as earth-born as these four world kingdoms, and with its Author we have made known to us simply one kind of human civilization, or world power coming in contact with inferior world powers, and getting the ascendancy over them. On this idea Christ was a mere man, born into the world as other human beings are. On this idea Christianity inaugurated by

Christ was *as earth-born* in its development as either or all of the four world powers of Babylon, Persia, Greece, and Rome. It was no more a stone cut out of the mountain *without hands* than was either of the world powers we have mentioned. Natural in its origin, it must be natural in its progress, and equally natural in its final outcome. If the origin was not the same, then the development was not the same, then the outcome was not the same—then the character of the progress and the outcome of this progress must resemble the nature of the origin, and being the same, we can have no emblem more fit to delineate the essential difference between the world powers and Christianity than the significant words, "*Cut out of the mountain without hands.*" We are shut up to one of two conclusions—a natural or a supernatural origin. If we call Christianity a natural outgrowth of civilization, we must to be consistent expunge all miracle from the Bible; but if we say Christianity and its great Author have a supernatural origin, then the miracles of Christ follow as a matter of course. We know that all biblical representation, both in the Old and New Testaments, points to a supernatural origin, and tells us not only that the stone was cut out without hands, but that it smote the image upon his feet that were of iron and clay, and broke them to pieces. We know that the future of the kingdom of the stone is spoken of as becoming a great mountain and filling the whole earth. What is the testimony of history upon the origin of Christ and of Christianity? Does it say all this came about simply and exclusively as a natural result of human learning or science, a mere evolution of the world forces of humanity? We know that Christ and Christianity did not come into this world as Babylon, Persia, Greece, and Rome—grow as they did, or meet the same fortunes as these world powers. We know there was not the slightest resemblance between them either as to origin or progress. Nothing could possibly portray with more accuracy the birth of Christ and Christianity than this same stone cut out without hands. Nothing in the way of progress could be more true to history than the advance of Christianity the three first centuries of the Christian era, and this just where the feet part of iron and part of clay stood, and where subsequent to Constan-

tine the great Roman Empire was divided into the East and the West, and where in its conquest by the Teutonic race, it became divided up into the European nations. Nothing is clearer than the great fact that, take away miracle, take away the supernatural of Christianity and all history belies itself. We have a contradiction in all the legitimate causes that underly all human affairs. Whether we can account for the supernatural or not, explain miracle or not, we are bound upon every principle of common sense not to attribute the origin and progress of Christianity alone to mere natural causes. We are bound not to assert that as explaining the origin and progress of Christianity which is alike untrue to all history and all true reason. Again, the way Christ speaks of His kingdom corresponds with its history, and all the promise of the future. We are not left in the dark as to what happened to the four world kingdoms, or as to what Christ told us would ensue to His kingdom. All its prosperity and all its past, present, and future success hangs upon the words, "My kingdom is not of this world." Here lies the reason of its success. Because it is not of the world, it is supernatural in its origin, and it must be also supernatural in its progress and its outcome. Why has Christianity never been crushed out? Why does it rise like the fabled Phœnix with new life from the ashes of civilization and mounts ever heavenward in its flight when all earthly power is striving to bring it down to the ground? We say that the birds fly because they live in an element of their own. So the secret of Christianity is bound up in the words, "My kingdom is not of this world." It lives and conquers when all the world kingdoms must die out before the march of that supernatural power that overrules all and absorbs all into itself.

Christianity owes nothing to civilization, but civilization every thing to Christianity. When it can be shown that man is an evolution from a monkey, just as the monkey through the long cycle of the ages comes from the moner, then, and not till then, let us talk of the origin, progress and outcome of the Christian religion as an evolution of civilization, and having nothing but that which it gets from this world. Reason and history will authorize us to say that the worship of Jupiter and Ve-

nus is a religion, or Mohammedanism is a religion, or Mormonism is a religion, or spiritualism is a religion with the old resurrection story of Samuel and the Witch of Endor, but Christianity is *the* religion, and unlike all other religions is attended with those evidences that prove it from God, a divine religion because it is supernatural in its origin—a stone cut out of the mountain without hands.

Fifth. The system of Christianity recognizes two great facts and is built upon them in such a way as imperatively to demand miracle, if we have any Christianity worthy of the name, and do not turn atheists, materialists, Pantheists, or Deists.

Omitting here all argument upon the nature of God, or miracle or law, and simply confining our remarks to what the Bible teaches as to God, viz.: God a Personal Being, Omniscient, Omnipresent, All-wise and Good, then if God is such a Being, the system of Christianity is a perfect key that fits into the character and providence of God, as related to man, just as any key of human manufacture fits into a lock ever so complicated in workmanship. The second great fact is man made in the image of God, man in his fall and man in his divinely appointed method of restoration. The first Adam defacing the image of his Maker, and bringing countless evils into this world, and the second Adam coming to restore the image of God perfectly, and recover from the ruin of the fall, and conquer upon this very earth that devil that tempted our first parents into sin. Now, we say such is the relation the miracles of Christ sustain to the whole system of Christianity that when we do away with the miracle of creation, and that greater miracle of Christ in the work of redemption, then we do away with Christianity itself. Having dispensed in the second Adam with all the miracles of restoration to body and mind we must, to be consistent, do away also with the miracle of the first Adam as made in the image of God; for when we speak of creation as a miracle we do not mean a miracle in the same sense as exists when a law of nature is violated, but a miracle in that higher sense that shows the most direct work of God in making a new nature, and with it creating new laws appropriate to that nature. Upon then the admission that Christ worked no miracles, where is our authority for speaking of the

first Adam as made in the image of God, supernatural not only in the creation of the body, but far more so in the character of the mind and heart impressed upon him when *first* he came from the hands of God? If the restorer comes into the world without a miracle, why should we not also expect that the first man would be an evolution from a lower order of animals, with nothing of the image of God impressed upon his person, rather than a distinct creation by itself, carrying with it the divine image? When Herbert Spencer ridiculed the carpenter God of Moses, and the mechanical God of Paley, did he think that all that belonged to the carpenter and the machinist was to be found in his own brain and those who thought of God as he did? God, as an infinite spirit, omnipotent as omnipresent, and omniscient, must have laws immeasurably superior to mechanical laws; and the mechanical laws in the creation of the first man and woman were but a very small part of those divine laws utilized for an end so great. The real question to be considered is this: If we admit miracle in the coming of Adam and Eve into the world, why not miracle in the coming of Christ into the world? Was the relation that our first parents sustained to the human family a more important relation than that which Christ sustained to humanity? If we take away the miracle of the second Adam how can we hold to the miracle of the first? If we do not hold to it, why speak of man as made in the image of God? We can, indeed, exult in the idea of man being the efflorescence of the animal world—the consummate flower of all animal existence above that of the vegetable creation; but *if this is all*, then if there is any image of God whatever in man, the lower orders of the kingdom of animals must come in also for a part, at least, of this image, especially if we make man to originate from a monkey. How different the majestic history of man, alike in his creation and his fall, as taught us by Moses from that gospel of dirt, as Carlyle appropriately calls it, when man takes his place among the animals in the vertebrate kingdom duly labelled and classified! But if man is as told us in Genesis, and is now as he has made himself, if God is as has been represented introducing the system of redemption from the fall, why should not the Great

Restorer reveal in the very system of Christianity the power of working miracles? Let us first get an intelligent idea of what the work of restoration means before we shut our eyes to the miracle of the Incarnation, the Resurrection, and Ascension into Heaven. Thus it will be seen that the two great facts of man made in the image of God, and that the system of Christianity is a perfect key that fits into the character and providence of God as related to man, verifying the truth of the words, "He that hath seen Me hath seen the Father," show that such is the relation sustained by the miracles of Christ both to Christianity and to man, that if we discard the miracles we do it at the expense of all just ideas of man's original creation, and the history of redemption that commenced with the fall of man, and was shadowed forth in the words, "The seed of the woman shall bruise the serpent's head." This is especially seen that upon the idea of no miracle, more particularly the miracles of Christ, we have in Christianity a system utterly inadequate to accomplish the end it proposes, to secure for the welfare of man. It proposes to save man from sin, and yet offers a Saviour who is only a man. It proposes to restore the defaced image of God; and yet no other influences are brought to bear to attain this end but mere natural influences, alike in the realm of spirit and of matter; we are to have the supernatural eliminated from one, and the miraculous from the other; for how can we prove the influences of the Holy Spirit and yet hold to the idea that Christ was only a man, and that He worked no miracles in attestation of the truth of His utterances? It proposes to open up Heaven to the believer. And yet, with confessedly a supernatural world to introduce the saved soul into, it resorts only to natural laws and agencies—to earth-born influences and powers, to bring this result round. We have Christ professing to see Satan fall as lightning from Heaven, but either there is no Satan to fall from his throne of dominion over captive man, or if there is a Satan, no other agency is exerted to bring this event round than such influences as Christ may be supposed to bring about as a mere man, or those other influences that proceed from other human beings who have lived or will yet live in this world. Christ taught His disciples that He had at His command legions of

angels to help Him whenever wanted, and that all power was committed to Him ; but certainly if Christ was not more than a man why should He claim that for Himself which no mere man could claim ?

Thus we might go on to show that remove the supernatural and the miraculous from Christ, and there is no congruity whatever between the end professed and the means adequate to secure the end. We have results, and yet an impossibility lying at the foundation itself of results. We have professions most amazing of power and dignity, and underlying the whole, the weakness, the limitation and the fallibility of mere human power and intelligence. Our conclusion is this, either the professions of the four Evangelists as to Christ, and the miracles worked to give credence and success to the system of Christianity are what they claim to be, or this system is nothing if the thing promised is the perfect redemption of man, either as to the body or as to the soul.

Sixth. Christianity as a system of belief with the miracles of Christ eliminated from it makes certain also the fact that we have taken from us our foundation for believing in the miracles said to be worked before Christ, and those miracles that are predicted to be worked in the future. If we are to judge of the future by the past, if it is true that all things continue as they were from the foundation of the world, how can we say that things will not always continue to be as they have been ? If we can point to the invariable operation of natural law, and the undeviating course of nature as never having been broken in upon, how can we say with the declaration of Scripture *not true* as to miracles in the past, that there will not be the same undeviating operation of natural law in the future ? Why can we not build our faith upon no miracles ever yet to come as we have upon no miracles that never have been worked ? Why have belief in the resurrection or judgment day ? This future is all associated with miracles, and if the miracles of Christ are to be eliminated from the New Testament, what credence are we to give to the miracles of the Old Testament, or any miracle whatever that is foretold to take place in the ages yet to come of this world ? If Christ on earth had no power to feed five thousand persons

with a few loaves and fishes of perishable food, how can He give the food of an immortal life emanating from Himself?

Take away the Resurrection of Christ from the grave and what have we left but that told us by Paul, "If Christ be not raised your faith is vain, ye are yet in your sins"? Leave the whole system of Christ's redemption unfinished in the tomb that held His body, and will not this immature redemption perish in the same grave that held the last mortal remains of our Saviour? Was not this the exact idea in the mind of Paul when he exclaimed, "If the dead rise not then is not Christ raised"? One proposition hangs upon the other: Christ raised, so are the dead raised, Christ not raised, so the dead will not be raised. But Paul does not stop with the body of man, he makes the great miracle of the raising of the body of Christ an event of transcendently greater importance than any benefit that would result to the casket that holds the soul. On the idea of no resurrection of the body of Christ, he uses in relation to the spirit of man these fearful words as applicable to the Christian, as to all others, "Ye are yet in your sins." But on the idea of a resurrection of Christ's body he exclaims, "O death where is thy sting? O grave where is thy victory? The sting of death is sin; and the strength of sin is the law. But thanks be to God which giveth us the victory through our Lord Jesus Christ." Here at once it will be seen how intimate is the relation that the miracles of Christ sustain to the system of Christianity, and how fatal to all Christian hope for the redemption of soul and the body when we take away the miracles of our Saviour. Paul tells us that sin not conquered in the person of Christ as related to humanity by His *triumph over the grave*, then the same ruin that befalls the body ensues to the soul. Thus there is a reciprocal relation sustained by the body and soul of man; victory in the one will result in victory in the other. Thus whichever alternative we take, the spirit, or the body, one cannot be ruined without the other or saved without the other. We cannot remove the conditions essential to a thing without removing the thing itself. An inspired Apostle puts a value so great upon the miracle of Christ's Resurrection that he makes this the *regal fact* that gives a positive certainty to the salvation both of the soul and body of man. The condition

essential is the Resurrection: that condition *fulfilled* there ensues redemption to the Christian, that condition *not fulfilled* no redemption. This is the same as saying, if we take away from the eagle the feathers and the wings, we have no flight of the eagle in the air. And the reason lies in the fact that we remove the condition by which alone flight in the air is possible, and so the same truth flashes forth in the words, "For as in Adam all die, so even in Christ all shall be made alive." In one condition death but in the other life.

Seventh. Another great fact showing the relation of the miracles of Christ to the system of Christianity will be found in the peculiar estimation by which these miracles were held by Christ and the Apostles. We have a most significant proof of this in the mission of two of John's disciples to Christ. "And John calling unto him two of his disciples sent them to Jesus saying, Art thou He that should come, or look we for another? Then Jesus answering said unto them, Go your ways and tell John what things ye have seen and heard, how that the blind see, the lame walk, the lepers are cleansed, the deaf hear, the dead are raised, to the poor the Gospel is preached." Now the point of inquiry is here, Why was it, that before the character of Christ's mission was delineated, before we are told of the supreme excellence of the Gospel in its adaptation to the spiritual wants of man, especially the poor in this world's goods, we have five distinct kinds of miracles alluded to by Christ as performed by Himself in confirmation of the Gospel He preached to the poor, and as a valid proof of the divine nature of that mission? The moral excellence alone of John's character was with the Jews sufficient authority for the Gospel he proclaimed under the extraordinary circumstances of his mission, but Jesus tells the two disciples that while He assumed a moral excellence far superior to John, who had baptized Him at the public inauguration of His ministry, that would culminate in the Crucifixion, He did works that never were performed by His forerunner. Now the reason all lies in the fact that such was the system of Christianity to be introduced into the world, that unlike the Gospel of John, which was restricted to a narrow circle of instruction, miracles were demanded in the one, which were not in the other.

John had his eye fixed upon the predictions of the Old Testament as to the Messiah to come to the Jews; his question was, "Art thou He that should come, or look we for another?" The reply of Christ amounts to this, "I am the Messiah! for I do those things predicted in the Old Testament of Me. Study the prophets. Observe what they say of My person, My works, the character of My instructions, how I am to be received by My own countrymen, what the system of Christianity which I am to introduce, what claims of faith and obedience I am to impose upon My disciples, who will hate Me, and who will love Me!" These were practically the characteristics of the Messiah, and John was simply told to compare the picture with the person that picture professed to delineate. If one corresponded to the other, then the question was settled of identity. Christ instructed the disciples of John not to ask the question what the Jews wished the Messiah to be, but what the prophets told the Messiah *should be*. The message to be sent back to John was that which told him of One who fully complied with all the conditions that delineated the Messiah that was to come to this world, and among those conditions the working of miracles was absolutely necessary, and so claimed by Christ in His message to John, not only because miracles were predicted to attend upon the Messiah, but because the character of that Messiah was delineated for two most important ends.

1st. That which pertained to His person as giving valid proof that He was the Son of God as truly as the Son of man.

2d. To show that the system of Christianity had to sustain it, those evidences that justified not only the transcendent dignity of origin assumed by Him, but all the claims imposed upon the disciples for their love, obedience, and self-sacrifice. It should not be forgotten that the Jews were peculiarly objective in their character. All reasoning and professions with them would have lost in their estimation all value, unless backed by what they looked upon as such credentials as Moses gave to convince the Israelites that he was a duly accredited minister of God. More especially was this so when they looked upon the Messiah that was to come as vastly greater in dignity than Moses, and therefore demanding far higher proofs of authority.

But how much more indispensable the miracles of Christ when it is borne in mind that our Saviour had not one element of popularity, as this word is commonly interpreted. Christ warred against Jewish sins, and especially that of pride—against all the national expectations of a Messiah based upon a misinterpretation of their own Scriptures. Christ proposed a discipleship that had nothing to recommend it of this world's glory, or wealth, or ease—a discipleship that, so far as this earth was concerned, offered nothing but humility, poverty, persecution, and the bitterest hostility of Jew and Gentile. Christ's religion was eminently unworldly, unpopular, anti-national, and adapted as much for the Gentiles as the Jews. Now put on one side the claims of Christ, or His doctrines, and on the other what Christ demanded of His followers to endure, and we have not only the highest possible reasons for the miracles of Christ, but more than this, the absolute impossibility of establishing the system of Christianity without miracles, for we must remember that if we admit the supernatural origin of Christ, we must also admit that no adequate proof of this fact could be given without miracles. On the other hand, if we do not admit such an origin, then we must, if consistent with true logic, give up the system altogether. Nothing is gained by taking away from Christ the divine proof of His miracles, or substituting for those miracles the declarations of professed friends, who assert that as to their working which is not true. In either case we take away the real credentials of Christ's mission, and in doing this we remove with the absence of divine authority the mission itself. Under these circumstances the Scribes and Pharisees would scorn the unmeaning words, "He casteth out devils through Beelzebub, the prince of the devils." With no devils *cast out at all* they could proclaim Christ either a deceiver or deceived. In either case the moral character of Christ would be shown to be justly open to the charge of one of two things, immorality in telling that which was known not to be true, or incompetence and fallibility in telling that which He supposed was true, but was only a fiction or a legend. Nor do we for the sake of saving the character of Christ really mend matters by supposing all these fictions and legends about miracles were got up long after Christ died as a

good man ignorant of what His friends would say of Him. The system of Christianity is *utterly shattered*, however favorably we may think of its Author. The magic word *authority* is all gone. The ambassador has lost his credentials, if he ever had any. We are all at sea, with no reliable chart or compass, and the words can have no meaning to us, "Come unto Me all ye who labor and are heavy laden and I will give you rest."

PAUL AT ATHENS.

[Delivered before the American Institute of Christian Philosophy, August 22d, 1886.]

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THE utterances and the methods of the greatest missionary produced by Christianity must be well worth the study of all Christian thinkers and workers. In his apostolate Paul chose great cities as the centres of operation, and was undoubtedly directed and assisted therein by the Holy Spirit. He was in Jerusalem, in Athens, in Rome—the cities that represented religion and culture and power. Perhaps for the generation existing in the latter part of the nineteenth century there are few points in the great Apostle's history more needful and profitable to study than his visit to Athens, because it presents to us the first contact of Christianity with culture as developed in high art and philosophy. These were the only fields for culture, as science cannot be said to have existed in that day.

Paul seems to have had no just idea of Athens before reaching that city; but his quick eye took in the strategic advantages of the place for Christian movement, and he sent back to Berea for Silas and Timothy, that he might have these valued coadjutors in his apostolic work. In waiting for them he was not idle. He studied Athens. While thus engaged he employed every opportunity that presented itself to plant the seed of the Gospel.

The city was about sixteen centuries old when Paul saw it, and during a few of the centuries immediately preceding his

visit it had been magnificently adorned by architecture and sculpture in the interests of the prevailing idolatry. Everywhere there were temples; the small were elegant, the large were magnificent. Everywhere there were altars to all the gods known to Greek mythology; and in the liberality and hospitality which ordinarily accompany spiritual indifference, there were to be found altars inscribed, "To an Unknown God."

The gratification of his æsthetic instinct could not blind Paul to the deadly cancer which was eating out the spiritual life of the people under this complexion of external beauty; nor did he for a moment feel that he was a mere curious traveller, or forget for a moment that he was a Christian missionary. On the Sabbath-day he reasoned with the Jews in their synagogue, and on the other days in the "market," the general gathering-place of the people.

No man who has zeal for Christ ever lacks a place. He will labor with one man as earnestly as with a thousand; in a chamber as cheerfully as in a cathedral. He that is faithful in the smallest place will be duly transferred to a larger. The Apostle could not be concealed in the one little obscure synagogue of his compatriots and co-religionists, hid away in some corner of the splendid metropolis, but was soon drawn into the *agora*, a place where not only merchants of all kinds met, but statesmen, orators, poets and philosophers—the fashionable assembly in which it was requisite for a man to appear often if he desired to be counted as in Athenian "society."

Stirred from without by the sight of the prevailing idolatry, and impelled from within by his constant zeal for his Master and the New Faith, Paul everywhere set forth Jesus and the Resurrection. How ever he varied his method of treatment, his fundamental theme was the Risen Jesus. There seemed to be perpetually present to his mind the thought that every human being had an immeasurable personal interest in Him who had been delivered for man's offences and raised again for his justification. In the market-place, or, as we perhaps should call it, the Assembly Rooms, he was encountered by men who represented two of the leading schools of philosophy at that time in Athens—schools that were then more than two centuries old.

The Stoicks represented pantheism, believing that "the all," the universe, is God; God is the universe. Believing the universe itself was a rational soul; that it was impossible to separate God from matter; that the soul was matter, and death was a return of this finer matter into the all-matter—that is, into God; when they heard of the resurrection of the dead, the announcement seemed so palpably absurd in the presence of what they considered settled and unquestionable philosophical doctrine, that it was regarded an impossibility.

The Epicureans were downright materialists. There was matter, and nothing else. Whatever seems orderly and the product of design, is merely the result of a fortuitous concurrence of the uncreated atoms which had eternally existed. This doctrine necessarily excluded God, the soul, morality, and responsibility. It involved the dissipation into the elements at death of all that we call matter and spirit, a distinction denied by them except as a distinction of different kinds of matter. Of course that school could have no data of ethics beyond utility; nothing that involved future reward or retribution. To them, also, the resurrection was an absurdity.

There was a third school, not mentioned in the Acts of the Apostles, called the Academicians, who, at the time of Paul, taught that there was nothing which could be known of God, if there was a God.

The Apostle thus met in his day the variations of erroneous philosophy which confront Christianity in ours. Through eighteen centuries the gifted and laborious errorists have not been able to invent one new error. Toward the close of the nineteenth century they are just what they were in the first: pantheists, materialists, and agnostics. Such we find them in Berlin, London, and New York to-day; such Paul found them in Athens eighteen centuries ago. But Christianity was fresh then, and the people he met had curiosity to know if it were possible to have a new school of thought. They induced Paul to go with them from the crowded *agora* to the quiet Areopagus, where, lifted above the multitude, secured from interruptions in the lofty place of their Supreme Court, they might ascertain the nature of this new philosophy.

The mingling of politeness and irony in their invitation to Paul is just the same in its tones and cadences as those which mark the intercourse of the pantheists, the materialists, and the agnostics of the present day in their intercourse with the Christian thinkers. "We wish to be enabled to know what these strange things mean." The irony was in the implied disparagement of what they had already heard from Paul. "It cannot mean much if *we* cannot take it all in at a glance!" is what the errorists of to-day intimate, as the errorists did in Athens. It is "strange"—that is, not at home in the realm of culture—if it be brought by any one who is not a pantheist, or a materialist, or at least an agnostic. Paul accepted the challenge, took his position, and began his testimony for Jesus.

His reply was polite, without any mixture of irony, and is in this an example to all Christian teachers. He stood amid an inspiring environment. If he looked up, there stood the Acropolis, beauty-crowned, with the noblest products of the highest art piled in richest profusion and most graceful arrangement on the noblest altar in the land, an offering to the gods worshipped by the populace, but despised by the philosophers. If he looked down upon the city, there was that wondrous temple of Theseus, the colossal Minerva, and the temples of the Furies and of Victory. Everywhere worship had brought the skill of art to its adornment, and the best fruits of the age grew on the tree of its religion, even when that religion was idolatrous.

Paul opened with words of politeness. A preacher of religion, he recognized his hearers as religious. He told them that wherever he turned his eyes he perceived, in all their works of art, that the Athenians were a more than commonly God-fearing people, intimating that he had seen no such exhibitions of religiousness in the other cities of Greece. It was a delicate compliment to their city, of which they were manifestly intensely proud. This wise exordium opened the way for the introduction of his own religion. He called their attention to the fact that in their beautiful Athens there was an altar inscribed, "To AN UNKNOWN GOD;" and he mentions the fact rather in commendation than in disparagement. Such was the spirit of the Apostle. His manner, also, is worthy of study. He employed

all the admissions of their religion and philosophy, attacking nothing that is not radically wrong. Whatever a select circle of philosophers might hold, there was planted ineradicably in the nature of man the belief in the existence of God. Every form of idolatry was proof of that, and the munificence of expenditure in the temples about them proved that the theistic idea was at once powerful and practicable. It wrought itself out in altars of exquisite beauty, and sanctuaries of surpassing splendor. Whatever, whoever, wherever God is, the instinct of the human heart is to honor Him. Man prays from instinct as from instinct a babe draws its mother's milk or a bee constructs his polygonal cell. If prayer were the result of reasoning, Prof. Tyndall and others might propose to submit it to some "test" of reason: but to submit any *instinct* to such a test is a scientific absurdity. Following that instinct when fancy and imagination had been exhausted, there might still be a God—there might be gods—who should be honored. The feeling after God was gratified by erecting an altar to a god not yet known to the Athenians, or, if known to their ancestors, was lost to them. Here, on such an altar, stood graven the confession of knowledge and of ignorance. It was not "To the Unknown God," for that would be an acknowledgment that there was but one God, and all their other altars were useless. Nor was it inscribed to "*God the Unknown*." He might be known to others, if not to them. The legend on the altar was the pathetic confession of the Athenians that there was a God, and that—they did not know Him.

Here was a pungent appeal to the philosophers about Paul. The people wanted to know God. The Stoics, the Epicureans, and the Academicians had been in Athens for generations. Were the philosophers no wiser, no better than the common people? If so, their philosophies were valueless. If they were wiser and better, why did they not teach the people about God? "They did not know?" Then this is a confession of ignorance. "What, therefore, ye worship in your ignorance," says Paul, "this set I forth unto you."

This is the stand for Christian teachers to take in this century. Let them say to the pantheists, the materialists, the agnostics

of our age: "Gentlemen, teach the people God. If you cannot do that, because of your acknowledged ignorance, be still. *We* know God, and we will set Him forth to the people." If they turn upon the Christian teachers and say, "That is your self-conceit; *we* are humble; we proclaim that if there be a God, He is unknowable." Is that their humility? It is the arrogant assertion that they comprehend the whole circle of the possible-to-be-known, and declare that God is not anywhere. It is the very modest assertion that what they do not know cannot be known by any other; that what the deaf cannot hear is not sound, and what the blind cannot see is not color. To the child learning the third column of the multiplication table the calculus is unknowable; but we know that there are those to whom it is not unknowable. The Athenians had not the obstinate self-conceit of modern Herbert-Spencerians. They simply said, "There is a God: *to us* He is unknown." What Paul said in the circle of Athenian philosophers, a Christian teacher may say to the pantheists, materialists, agnostics, and the unlettered masses: "What ye worship in your ignorance, this I set forth unto you."

Taking the admission of the pantheists and the agnostics, accepting the implication of what had been graven on stone altars, assuming what is quite plain, that one cannot be agnostic and atheistic at the same time, because to assert that a being is unknowable is to imply its existence, since it *must be* to be unknowable, the Apostle confronts the errors of his hearers by proclaiming the truths of the Gospel. This is a most valuable example to all thinkers who are disposed to communicate their thoughts. It is unwise, if not wicked, to attempt to take from a man any faith, however defective and erroneous, until we are prepared to substitute a faith that is sound and true. A missionary must let the lowest African keep his fetich until he can give that savage a God who can be reasonably worshipped. What is the use of cutting off the top-growth of an error if its root be left to sprout? What better way to exclude poisonous growth than pre-occupying the ground with seed and roots, and shoots of truth?

It seems difficult to see how the Apostle could have presented

a briefer or more compact refutation of what was wrong in their theories and practices. He cuts at once to the core of their fallacies. "God." "The God." There are not "Gods," and polytheism is a falsehood based on a truth. There is *a* God. Atheism is the vacuum which humanity abhors. THE GOD is a person. He has conscious existence, a designing intellect, a deciding will, and spontaneous activity. He is creator. He made "the all," and therefore He cannot be "the all," since it is inconceivable that anything should be the creator of itself. The theory of pantheistic stoics perishes before the conception of a *personal* creator, and the theory of the materialistic epicureans perishes before the conception of a personality existing before all matter, and the conception of the production of the material by the immaterial. God is the producer of each thing, and not the product of anything or of all things. He was before they were. He can be without them; they cannot exist one moment without Him.

With what rapidity the Apostle enlarges their horizon ! He does not argue. He asserts, authoritatively, as every Christian teacher must. The assertion of the personality of The ONE God gives him ground of appeal to their reason and conscience, which are always to be addressed by a Christian teacher. Looking above him, the Apostle saw the temple-crowned Acropolis. Beautiful for situation, the joy of architecture, how small a thing was that sanctuary as a house for Him who had made all the marble in all the quarries of the earth, and all the wit in all the brains of men, and all the heavens above the earth. And how small a thing that stone Athena Polias, the goddess, compared with Him who made and who fills the earth and the heavens. He pressed this upon his hearers. Looking below him, how many an altar-place must have caught his eye. Perhaps at the moment, priests were seen leading garlanded victims amid sacrificial ceremonials. What can that mean ? Does the God who made all things have a need which can be supplied from human resources ? Such is the degrading implication of idolatry. But it is a belittling falsehood, shooting its poisonous errors in many directions. The whole system of Pagan sacrifices was an attempt to bribe the God that was worshipped. It was

founded on a falsehood which reversed the facts of the universe. There is not anything which God has not made. There is no such thing as *natura naturans* without God, no "*that which makes*" outside of God. Such a thought is unmixed heathenism. The Athenian paganism was better than that. "Manufactured sanctuaries," as Paul called them, were built by the hands God had made, and constructed of the materials which God had made. If God were spiritually worshipped therein, well and good; but it is against all reason to attempt to confine the illimitable God within any walls, or to regard as unsacred any part of the universe He has made.

This naturally leads Paul to deal a blow at the mechanical theory of the universe. It is not an automatic machine. While "the all" is not God, God is everywhere present in "the all," and having created it, He preserves it by perpetual and immediate immanence. This is the doctrine we must constantly press against the godless scientific hypotheses of the day. On no system of philosophy which does not teach the active presence of God everywhere, can we supply the gaps of science. What is life? Whence comes it? How is it continued? These are questions for which science has no answer. And there has never been a scientific theory which accounted for the breaks, the catastrophes, the cataclysms which so often appear in nature. Even the modern doctrine of evolution is a tangled web, a field of concealed pitfalls, or a mere scientific dream, a hypothesis utterly unprovable on scientific grounds, *if God be omitted*. But in the philosophy of Paul's Areopagite speech, life is that which God constantly ministers out of Himself to some of His creatures, by which He keeps them differentiated, as animals and plants, from all inorganic bodies.

This truth glorifies man while it honors God. The old stoical and epicurean systems degraded both God and man, by making both only parts of and dependents upon "the all," or God nothing, and man no better than mud. God ministers life and He ministers air and all other things necessary for life. Nothing comes of itself. God "is giving" everything. Correct ideas of God lead to correct ideas of man. The unity of God and the unity of the human race go together. One God, one humanity;

many gods, many humanities. Polytheism had produced national narrowness and pride. The Athenians believed themselves sprung from the ground, aborigines, and despised all other peoples. This prevailed wherever paganism existed. The concept of one, personal, creating, preserving God, is the concept without which science can have no unifying idea as regards either nature or the race of mankind. Starting with the unity of race, we must reach the oneness of God ; believing in different natural origins, it is not difficult to reach different mythologies; and polytheism genders and maintains race differences, while monotheism begets and preserves the idea of the unity of humanity.

The Apostle presses his hearers further. Not only does each individual existence depend upon the constant ministry of life from God, but nationality is perpetuated and national life limited by the volition of the Master of heaven and of earth. How far the Greek nation should extend, what should be the limits of the influence of Greek culture, and what the duration of the national life, were all dependent upon God's direct execution of His own will concerning them, since He has fixed the boundaries of the nations and arranged the system of their duration and succession. Paul teaches his hearers the necessity of depending as a nation upon God, and lays down the fundamental principle of international intercourse, comity, and prosperity, in the acknowledgment of the sovereignty of God over the family of nationalities. The race can never attain to its highest possible condition until "the parliament of man" shall recognize the sovereignty of God, and employ its powers in devising measures to have His will done everywhere on earth as that will is in Heaven. There is thus found a sufficiently high reason for the existence of individuals and of nations, and of providential national history—that men might seek God. If there be no God to seek, then the universe is aimless, and science is impossible, because it has no foundation and no unifying idea. But in the very grammatical construction of his sentence, Paul showed that he believed that the unaided efforts of man would be fruitless in the effort to find what God is, if man were not assisted by some revelation. So near and yet so far is God from each individual

And then the Apostle, following the suggestion of his statement, that God "is not far from each one of us," utters the sentence which must be the revealed basis of all stable science and nexus of all consistent philosophical thought.

"IN HIM WE LIVE AND MOVE AND HAVE OUR BEING." The Pantheists who were present could not seize this as an admission of their theory, since the speaker had in advance guarded against that by asserting that God was the Creator of the universe and the Ruler of heaven and earth, and must therefore exist independently of all things. On the other hand, the absorption of any part of the universe by God, the Hindoo *Nirvana* theory, has no place. The Apostle's statement of his philosophic system maintains the individual personality of man and the individual personality of God, and stated the relation of the two. "Each one of us" is "in God"; and it is because of that relation that we "live" and "move" and "exist."

The scientific canon is, that that hypothesis which accounts for the largest number of known phenomena is to be adopted as the working hypothesis. Eighteen hundred years have passed since Paul's address was delivered, and the later years have been distinguished by ever-increasing scientific activity. The result is, that if one hundred men be now selected as the most able and trustworthy teachers of science, it is probable that no six of them would agree upon even a definition of life, and possibly no three of them would be willing to stake their reputation upon the assertion that any single theory accounted for the majority of the known phenomena—*except the theory announced in Paul's Areopagite address*. The scientific teacher may affirm that no one knows what life is beyond this, that it is that which has come from without upon inorganic matter, and therefore must have come from some living thing, since there is no life which has not come from life. Now that this life should not have fallen on all, and should have fallen upon some inert matter and made it vegetable, and upon some inert and vegetable existences and made them animal, and upon some animal life and made it spirit, involves (1) choice; (2) volition, and (3) spontaneous activity of the previous life. These give that life the characteristics of personality. The dissipation of energy in all

living things involves the necessity of continuous re-supply. Paul's theory accounts for all this. Given an ever-present Person, who has exhaustless stores of life, and you have a unifying scientific idea. Exclude that idea, and you have no rational theory to account for the three things in Paul's three verbs, which express existence, motion, life.

Now, having very boldly and clearly set forth this much of his gospel philosophy, the Apostle wisely again conciliates his hearers by reminding them that this truth had been uttered by certain Greek poets whom he quotes. What the people had taken as a poetical rhapsody, and what the writers even may have regarded as a poetical figure, was the exact utterance of a strict truth: "We are His offspring." He concludes his argument against the worship of images by showing how irrational was the pagan habit of thought in which the religious cult of idol-worship had its root. Men are the offspring of the Creator and Lord of Heaven and earth, while silver and gold and stone are the inert inorganic creatures produced by God's power. It violates all the sanctities of thought for the former to cherish the notion that "the divine" is like these minerals and metals. The very fact that a man had taken up a piece of marble and deliberated *which* god he should make, and how *that* god should be represented, and that even the representation of his ideal would depend upon the amount of his skill, ought to make idolatry repugnant. A comparison of any idol, even of their great Minerva, with any living Greek woman who was an offspring of God, would show what a bridgeless abyss lay between the most exquisite production of human skill and the breathing, smiling, dancing, thinking, loving and lovable daughter of God: then how measureless the difference between the idol and the divine!

In all this discourse there is exhibited the wisdom of the Apostle in avoiding personal offence while striving to destroy a powerful and deep-rooted falsehood, which was injuring the individual and national life. He does not say, "*You* have been altogether in error in this matter;" but he says, "*We* ought not so to think."

Having shown that God had made revelation in the world's

creation and man's conscience, he began to complete his discourse on statements of God's revelation in redemption. God had allowed sufficient time to elapse for man's study of the two former. He had shown no special vengeance against an idolatry which had so dishonored Him, leaving men merely to the injury which such error could but produce. "But now He commandeth men that they should all everywhere change their mind" and have right thoughts of God. A great crisis had come to the world. It was to be judged. It was to be judged in righteousness. It was to be judged in a man. God had ordained that man. God had appointed that day. The judgment of the world would turn on its faith in Him. A man's character would be formed by his faith in Him. A man's intellectual and spiritual destiny would be determined by his faith in Him. *He is the crisis, the judgment, of the world.* As such, it was necessary that there should be afforded to men a most sure foundation for their faith; that sufficient basis was laid in that Man's resurrection from the dead.

And then the philosophers and the common people united, by indifference and by mockery, in breaking up this grand, lofty and compact discourse, to which Plato and Socrates would probably have listened with rapt attention. But the earnest Apostle had succeeded, as has been well suggested by another, in opening to the eyes of some, God's revelation by creation and the history of man; God's revelation to man's rationality and conscience; and God's revelation in the Law and the Gospel. If he had only been allowed to render full explication of the lines of thoughts so rapidly, so broadly, and so accurately drawn, and if a faithful report could have been transmitted to us, the world would have a complete sketch of Christian Philosophy. What we do possess is, at this day, of more value to mankind than all else that has come down from all the literature of Greece.

While Paul spoke, the idols crowded the streets and crowned the heights of Athens, and pantheists, materialists, and agnostics held the schools and ruled the tribunals of the city that was the eye of Greece, as Greece was the eye of the world. To-day those idols and altars are merely curiosities of art; their worship

has been dead for ages; and the Porch and the Academy are things of the past. "THE MAN" whom God had ordained, has been worshipped on the Acropolis, and is this day worshipped in the palace of the King of Greece, and is the only thing in Heaven or earth receiving distinctive religious homage in the city of Athens. The system of philosophy in Paul's discourse is to-day maintained, and explained, and enforced, by more brains and moral power, and with more richness of illustration than ever before since Paul's voice was drowned in the mockery of the men who could sneer at what they could not controvert. And to-day any man's intellectual and moral worth, his height and breadth and weight among men, are all measured by that man's faith in THE MAN whom God has ordained to be the world's judgment, "whereof He hath given assurance unto all men, in that He hath raised Him from the dead."

VIEWS AND REVIEWS.

THE CONDITIONED, THE ABSOLUTE, THE INFINITE.—Rev. F. A. Wilber, Ph.D., of Central College, Ohio, contributes the following to CHRISTIAN THOUGHT :

These three designations, which the present paper proposes for consideration, embrace both in themselves respectively, and in that necessary relation to one another in thought which gives them distinctive character, the essential elements of all philosophical consideration; they span the whole field of philosophy. Examination of the history of philosophy will convince us that its discussions in the hands of its ablest champions—the abler, the more marked the facts—are simply efforts to put into consistency with one another these three conceptions of essential character, as necessarily pertaining in thought, the one or the other of them, to existence. I point, for proof and illustration of the statement, to Kant, Hegel and Hamilton. The philosophy of the latter is appropriately described as "the philosophy of the Conditioned," as contradistinguished from the Unconditioned, or the Absolute. Kant started out to find the authority, in or as knowledge, of those conditions which do unmistakably determine to thought all the objects of cognition. Not being able to reach what he sought in authoritative recon-

struction of realistically objective knowledge, he located the authority of determining conditions for the things of knowledge, merely in the knowing subject. It is a mistake altogether unworthy of a fair estimate of Kant—confessedly one of the profound thinkers of our race, to whose work philosophy is now returning from its extravagant flight into Idealism—to attribute to him, as many seem to do in their estimate of his subjective forms, a loose whimsicality in the field of speculation. Such an estimate of Kant argues a defective estimate of what metaphysic is to do. Kant was searching in real metaphysical style for the authority of those conditions which do determine to thought all our objects. He was not satisfied, as, after the scepticism of Hume, he should not have been, to rest in mere convictions which were not to be verified in faculties of knowledge, shown in articulate working to be competent thereto. Hegel was equally intent upon the Absolute, *i. e.*, the explanation from the starting point, so named, of conditioned existence as expressed in thought. We may think him unduly presumptuous, but we cannot fail to admire the comprehensiveness of his scheme of philosophy, and the ability with which he works it out.

At the outset, let us notice the somewhat frequent, but not very wise observation, that the Infinite and the Absolute are only abstractions. The remark seems intended to belittle in advance, and by a depreciatory epithet, the metaphysical theories which make use of these designations. But what is an abstraction? Simply a logical product embodied in a term of language, a product gotten normally by idealizing, *i. e.*, abstracting and combining the one or more essential features, of some existence already realistically apprehended. All the terms of speech indicative of existence in a common character, are common nouns, and represent abstractions. The term becomes an epithet of depreciation only when we cannot apply or restore it to a realistic object in the consideration of which it should have originated. Then it becomes a term representing nothing realistic. Our abstract nouns, so called, are saved from depreciation, because, though not representing real existences, they do represent real qualities. In metaphysic there are no abstractions. Logic deals with abstractions; every

term representing common existence is such. But metaphysic has none and can have none, from the very fact that it must get its realistic object by processes which metaphysic is to explain before the work of abstraction can begin. There must be something in view, in cognitive possession, from which to abstract, before there can be an abstraction.

Now, in this prior province of realistic attainment, existence must take, to rational thought, one or the other of these three characters: it must either be conditionally limited, come under the character, as philosophically expressed, of the Conditioned; or it must be unconditionally limited, the Unconditioned; or it must be just unlimited, what philosophy calls the Infinite. I think a better system of designation is accomplished by the word *Determined*. The objects of knowledge are determined to thought—both to thought and in fact—by relations to other terms necessary to the objects as being what they are. The Absolute is undetermined by any necessary relation; whether there might or might not be, on the part of the Absolute, accidental relations to other existence is not considered, and, indeed, is immaterial. Metaphysic deals with the determining relations necessary to the thing of knowledge as being what the thing is. Denying all such determination to the Absolute, metaphysic denies, not indeed its existence, for the term supposes an existence by its opposition to the Conditioned, but all determination such as to make what is indicated an object to thought. Thought, as rational, gets its foothold simply and only in determination for existence as accomplished by necessary relations, *i. e.*, relations necessary to the thing as being what it is. The ambiguity in the term *limited*, which I have sought to avoid by substituting the term *determined*, lies in the difference of the popular usage from that of philosophy. In common speech, we speak of limits as of actual boundaries or barriers for the thing limited. The limitations of metaphysical philosophy are all those of thought determinations of the thing. They are by and in relations of thought. It is hardly proper, I conceive, to say that a body—or, dropping the article for the sake of general philosophical character,—that body is limited, in the common sense of the word, by space; while it is eminently proper to say that

body is determined by space. The rational character of body is achieved to thought by and through determining space. Still more decisively, when we come to dynamic quality, may the word determine supersede the word limit in metaphysical usage. We could not well say that an alkali is limited by an acid; whereas, it is a metaphysical leader of prime value, to say that an alkali is determined to thought by an acid, and that without an acid this determination, as one of chemical affinity, would be lacking to science and knowledge. The relation of the alkali to the acid is necessary, if the alkali is to find chemical demonstration of itself. The province of relation is, indeed, the only field of necessity as a cognition.

In realistic philosophy things are assumed to be realistically determined in fact, as the necessary ground to their being determined in and to thought. Realism and Idealism part company at this point. Idealism gives up, slurs over, the province of metaphysic, which is that of realistic determination as witnessed in prior cognition, and comes at once to idealistic determinations of logic. Idealism gets its abstractions before there is anything realistic in possession from which to abstract. It adopts the vicious principle, which is an inversion of the true course of knowledge, that we know only through, by, and in ideas. This principle soon runs to the length of Idealism, a knowing nothing beyond ideas. Many who wish to stop short of such result do not hesitate to go a part of the way to it in company with the vicious principle. On the contrary, we must know realistically before we can have ground for ideas, or conceptions. These are wholly logical material, presupposing in realistic consistency, the attainment already of our object in real knowledge. How could we abstract and gain this material before we had in cognition the thing from which abstraction is to be made?

An object or thing, in order to be subject to the abstracting process, must have been determined to thought. The features which we idealize and represent in our idea or concept are always determined features, *i. e.*, they are ascertained by and through necessary determining relations, which are all relations *ab extra*. Common, natural consciousness passes over all this work of determination. It is done, but it is not noticed until recalled by

metaphysic. We seem to ourselves to see our object as absolutely presented, *i. e.*, without dependence for cognition upon determining relations to other terms; whereas, we most certainly cannot see body without first having determined phenomenon to thought by the postulate space, which last no one has ever claimed, in the name of philosophy, as an apprehension by sense. How then does space come into knowledge? Only metaphysic, which is pre-eminently the science of cognitive determinations, can answer. This reference to space will, perhaps, illustrate the supreme place, in metaphysic, of determining relations, and the supreme folly—in metaphysic still—of proposing to pass over this cognitive province by an absolute act,—an act that would embrace the object of knowledge, apart from determining relations achieved not phenomenally, but purely by rational thought.

We come to the Absolute as a term of philosophy to be justified as applied to existence. It will appear at once that, if what has been affirmed above be true, *i. e.*, if all rational character, all comprehension, comes from determining relations necessary to the object, when we get beyond the possibility of determining relations cognitively and are still obliged in reason to postulate an existence, we must, perforce, leave that existence without assignable character. We have come, if these be the necessary circumstances of knowledge, to the Unknowable of the Agnostics; and the character of the Unknowable, if not just that of the Absolute of Neoplatonism, is precisely that of the Absolute of the Hamiltonian philosophy. We know *that* it is, but we do not know *what* it is. That the Unknowable comes into consciousness, even an indefinite consciousness, is merely Spencerian, without the slightest authority either in Hamilton, or—what is far more damaging—in fact.

Now to demonstrate the philosophical necessity and significance of this postulate of reason, the Absolute, we have only to do what, I am obliged to concede, extant metaphysic has not yet fairly done—though I do not by any means despair of the doing—viz., to demonstrate articulately the *quo modo* of the entrance into cognition, and the unassailable character, or authority, for objective, as well as subjective purposes, of these

rational determinations, or conditions, or limitations which make so largely the rational characters of all our objects. It will be found,—I feel safe in the prophecy,—that, phenomenon being given, the determinations in which rational cognition is grounded necessarily follow in the use of reason, as far at least as phenomenality goes—see Kant,—and not with subjective validity merely, as Kant held, but with the same sort of universal authority as that which is carried by the mathematical axiom. When phenomenality fails as the necessary ground, external and internal, for determination, there is no possibility, as Kant rightly said, of carrying determination further. Still, if the work of reason be not complete in conditioned existence, or as concerned with it, the mind cannot stop there with the sense of a finished work. It has the same necessity for postulating an existence—not an abstraction—beyond and further, as for postulating space for the determination of phenomenon of sense—for postulating substance and nature as the determinations of things possessing quality; in other words, the claim is that the Absolute is a postulate of reason as already embracing conditioned existence. We know that the Absolute is, but we don't know what it is; for knowing what it is involves, as Sir Wm. Hamilton stoutly and justly maintained, this very conditioning act of reason and conditioned character of the object, both of which distinguish between the conditioned and the unconditioned,—both unconditioned and, in natural reason, unconditionable. Science, knowledge, embraces in comprehensive treatment only the former. Philosophers have thought of a science of the Absolute, only under stress of the philosophical necessity of bringing the Absolute into some terms of unity with the conditioned. We need only consider the word, to see that it cannot apply to what is matter of science in a comprehending function, such as science is supposed to carry. Absolute, *i. e.*, loosed from;—from what? From any kind of relation *ab extra*, necessary in thought or in fact, to what is proposed. If we look at the objects of our knowledge, we see that they are all determined to our thought by relations *ab extra*, necessary to the objects themselves, respectively, as being what they are or are found to be. They cannot be identified to thought in any other way. For, as to looking

into the objects by themselves, or as absolutes, to find their intelligible character *ab intra*, we might just as well attempt to look into a millstone,—a first-class French burr. And this is only saying that rational knowledge cannot enter the province of absolute apprehension, a province which I will venture to describe as Kant described it, despite the needless and somewhat shallow slights put upon the description as a mere subtlety of the Kantian intellect, viz., knowing the thing in itself.

When we grant that a conditioned universe, or one made up of conditioned existence, cannot stand alone to human reason,—and this is something that, it would seem, every sane mind must grant, for a universe conditioning and determining itself is, to all intents and purposes of reason, a universe creating itself,—we postulate that background to the universe, which philosophy has very generally agreed to call the Absolute. And the force and significance of the postulation is just this, to arrest all further progress of reason and bring to a conclusion that reaching out after further conditions which would otherwise know no end. We can give no comprehensible or cognitive character to the Absolute, because we can give such character only in determinations which will of themselves reduce our Absolute to the conditioned character and category, and require us to look beyond for the Absolute. We cannot make the Absolute a creator, nor bring it to answer religious purposes as the object of faith; for the object of faith must have qualities, character. Religious faith exercised toward the Unknowable is a Spencerian invention. Strange, strange, what vagaries some people who pass well for philosophers, will get into their wise heads! A Creator must have a motive or reason for creation, if he be personal, and what motive or reason can be found in the Absolute, who, by the force of the term, is released completely from rational relation to what he is to create? Rational relations all originate to thought in conditioned existence. They are predicated of the object as finding its complement, counterpart, or at all events, that something necessary to itself or to its functions, only in what lies beyond itself. The universe, as a term of reason, demands relation to a term beyond. The Absolute, *ex hypothesi*, cannot rationally go

beyond itself. Hamilton, therefore, described it as the unconditionally limited, *i. e.*, there is nothing necessary to it in thought, and there is no determination for it in thought by and through a further term.

I will now notice the discussion about the Infinite, and then come to the question whether we can, in philosophy, substitute for these terms the God of the Christian faith? We have said that the Absolute is undetermined to thought because of the lack of conditions. Infinite applies to that which is undeterminable to thought through lack of limitation, this time in the common use of the term limit. That which is unlimited by barrier or boundary is infinite. The Infinite is, as correctly affirmed by Hamilton, of far less moment to metaphysical philosophy than the designation just considered. Indeed, there is no objection, as respects it, to be made on the part of philosophy, to the depreciation implied in the epithet abstraction. The justice, of such application, according to logical treatment, is still in question; for the Infinite is neither obtained by process of abstraction from a realistic existence, nor is there any comprehensible application of it to a real existence, which is possible after the manner of realistic knowledge. The only application of infinite which comprehensive reason can make, is to time and space, which, though rightly claimed by realistic philosophy to belong to the province of realistic existence, are not themselves existences, but only the determining postulates of existence.

We return to Hamilton, of whose work this article is likely to turn out a criticism. Unquestionably, the unfortunate part of his system was his resort to the logical principles of non-contradiction and excluded middle. It is only a specimen of the vicious practice of mixing up logic with metaphysic, the reproach and confusion of which rest widely upon philosophy. The stronger relief of the vice in Hamilton, stronger, *i. e.*, than common, is due to the nerve and decisiveness of the hand employed. Strength, if it fails to fall upon the true, will always exaggerate the false.

Hamilton's Philosophy, of the Conditioned with the accompanying and implied version of the Absolute, stands to-day unassailable in any fair rendering of metaphysic as the science

of the necessary processes and results of reason. The clay in his image of gold is, that having no articulate metaphysic with which to sustain himself, he resorted to the logical hocus pocus of non-contradiction and excluded middle. Years ago, in a powerful criticism upon Hamilton, Professor H. B. Smith evinced this essential weakness, without himself supplying, so far as I am informed, the deficiency of real metaphysical work by which the strong man was shorn of his strength, even in the presence of those far weaker than he. Hamilton's metaphysic was just that of those who have—not criticised him; for criticism involves some fair appreciation of his work, even though its defects were to be signalized as was done by Professor Smith—but thrown him bodily overboard, as the sailors journeying to Tarshish threw overboard poor Jonah. Looking at the treatment he has received, one naturally thinks of the heathen idols, which, failing to answer the purposes and wishes of their worshippers, are taken down from their pedestals and dragged ignominiously in the dust. We can apply the illustration, it may be, even to the animus of the treatment. The idol is subject to such indignity, because it fails to answer, in some particular case, the needs and wishes of its worshippers. Hamilton's Absolute would answer no purpose of dogmatic theology. Passing by its metaphysical defects, this appears to have been the grand reason for the rapid decadence of the Hamiltonian Philosophy of the Conditioned. The first reason for some modification of the too exalted views that were at first entertained of him and his work, is what has been named, *viz.*, the absence of real metaphysic, and in its place a false and unsatisfactory metaphysic, in respect to which his impugners are in the same boat with himself—a metaphysic which makes knowledge an act so far absolute in the knower as to be without condition except that of something realistic to know, and which makes the object reached to be without conditions in knowledge except as something realistic to be known. It was not a just reason, while it appears to have been in good part the real reason, for throwing Hamilton overboard, that his Absolute could not be used for the purposes of religion and theology; in other words, it was not identical with the God of Revelation, and not capable of being replaced by the latter.

Before coming to this point specifically, let us advert to the "imbecility" of the Hamilton philosophy, indicated or justified by the author in the alternative, limited or unlimited, neither of which is conceivable, as applied to time, space, and the Absolute, but one of which by the logic of excluded middle is necessary. Professor H. B. Smith, as I remember his criticism, very pertinently adds the question: Which one is necessary? If one of the extremes be necessary we ought surely to know or to be informed which is the necessary one. The truth which demonstrates the inappropriateness of logical principles to this whole department, is, that neither of the contradictions is necessary in the application in view. Neither limitation nor illimitation is necessary to the cognitions space and time. Space and time are neither objects nor things at all, demanding to be limited. Conception or comprehension has therefore no application to them. Our affirmation of their illimitation does not rest in the least upon our conception of them,—conception of the Infinite is utterly out of the question,—but upon the obvious and indisputable fact that we have nothing in cognitive possession, or within cognitive reach, with which to limit them. In a clear conviction to this effect, we pronounce space and time, with all the authority belonging to reason, to be unlimited. And here is the realistic genesis of "the Infinite," all the genesis that can be found, with a very strong suggestion, at the same time, of the impropriety both of the capital and the article.

The propriety of calling this inability to conceive by limitation what is not to be conceived—what practical reason, either as knowledge or as faith, does not call upon us to conceive, an "imbecility," as Hamilton called it, is indeed questionable.

While passing this point of the infinite in knowledge and its applications, let us advert, lest we might not come so near it again, to the use of the word infinite in the admirable definition of God, given in the Westminster Standards: "God is a Spirit, infinite, eternal and unchangeable in His Being," etc. We may say that the application here rests upon a little different ground as matter of philosophy, as well as of Scripture teaching, from the one just now in view in the case of space and time, different and yet the same. The sameness is found in the fact that, ad-

mitting such a being as God, we assign and can assign no limits to His being and attributes; to multiply infinitely the attributes of what is sought to be identified as God under the designation the Infinite, is sheer nonsense. The difference is found in this, that in realistic philosophy God is a realistic existence, whose necessity it is as such, both in comprehensive reason and as an object, either to knowledge or to faith, to be limited. An infinite bodily existence would be a contradiction in terms; for determination on all sides by space enters into the nature of body as cognizable. An infinite spirit would be a like contradiction were it not that spirit is not determinable by space at all; nevertheless, if there is not contradiction, there seems to be incongruity or redundancy in denying to spirit such determination. In the universe of space, if the expression is allowable, and as needing to be determined there, if to be definitely apprehended, we have no conception of spirit, either as finite or as infinite, and hence no more as one than as the other.

We do not, therefore, say that the definition of the standards is unmeaning. It merely distinguishes the Being whom it defines from all material and creature existence. This is all that it does. In some of the South Sea Islands, where animal life of the genus mammalia was limited to the two species, hog and human, a logical emergency arose through the introduction to the islands of the horse. The islanders, whose vocabulary even for conditioned existence, was of the scantiest pattern, called the interloper a not-hog. As, leaving themselves out, they had still but two species to name, the negative term was sufficiently definite. So the framers of the standards, who were both devout and, on the whole, wise men, found it sufficiently definite to say that God is a Spirit, not-finite in His being and attributes. The word gives only a negative character, which, in the circumstances of a classification involving but two essential characters, is sufficiently definite. We classify in the one when we exclude from the other. I trust the undignified illustration will find excuse in its pertinency.

We may now come to the question which modern circumstances of thought and interest will take to be the vital point of

the whole matter, viz., Can the God of religious faith be put with philosophical consistency in the place of the Absolute of speculation? I say nothing here of the Infinite; for that is but the vicious personification, not of a quality of realistic existence, but of the fact that time and space and the Absolute are to rational thought illimitable. Hamilton called the latter the unconditionally limited, but in this case of the Absolute the unconditionally limited is the unlimited. Existence unconditioned to thought is existence unlimited to thought; but the quality of being unlimited is of no significance to the special consideration. Our answer is unhesitatingly and with all emphasis, that no such substitution can be allowed without a work of re-interpretation, to which philosophy at least is incompetent. The being reached, and the only being beyond conditioned existence to be reached by necessary process of reason is the Absolute of speculative philosophy, whose broad differentiation from conditioned existence is that the former is without necessary relation and therefore wholly undeterminable to thought. Determination to thought comes only through necessary relation. Necessary relation is assumed whenever and wherever qualities of existence are conceded; for the rational function of quality is to find fulfilment or correspondence in other terms of existence. The God of religious faith, on the other hand, is a being invested with necessary relation, and therefore a conditioned being. This was Hamilton's statement, which succeeding discussion does not oblige us to withdraw. Not only is there a nature and character attributed to Him, for which, as belonging to a strictly mono-existent being, creation is the necessary field for exercise and demonstration, He is reached in religious faith by no such process as pertains to the apprehension of the Absolute. The doctrine of an intuitionally necessary apprehension of God as an act of universal reason, is totally inconsistent both with itself and with two or three facts, which have a historical character, and are therefore easily refuted, if misstated. It is inconsistent with itself; for the qualities of necessity and of direct apprehension as fact, which is what we understand from the etymology of intuition, are not only distinct qualities, but may be and usually are inconsistent with each other as qualities of cognition.

What we identify as necessary we have no cognitive need to identify further as fact. The *must be* of necessity supersedes the *is* of fact, and the *is* of fact is inconsistent with any further attainment or need of a necessary character. Intuition cannot, holding fast to etymological meaning, *i. e.*, a straightforward or absolute apprehension as an object, describe a necessary act of knowledge. But eschewing metaphysic, let us come to the historical facts, with their decisive bearing upon this point.

First : The existence of God has been denied, not merely in the spirit of wilfulness, though we do not expect that the denial can be made to stand clear of moral and total depravity, but upon philosophical grounds. How could the denial be made by thoughtful and serious minded men, if the demonstration of God's existence be such as is claimed ?

Secondly : Theists, men of the highest talent and character, have resorted to argument to prove the existence of God. A thing that is intuitively necessary of apprehension is as far removed from rational connexion with proof or dependence upon it, as is the mathematical axiom.

Thirdly : The knowledge of God, whatever can claim to pass under that designation that is not supernaturally attained, is the product of an entirely different process from that assumed in the claim of intuitive necessity. This latter process is inferential, goes on by inference from man and his faculties as exhibited within the sphere of consciousness and conditioned existence. This is undeniably the case in all heathen religions. Jupiter, Mars, Venus, Thor, were the worshippers themselves, only removed to the inaccessible province, duly exaggerated, as became the role they were to assume, and released from the hard necessities pertaining to their human lot. Nor is this process, as the general process of faith, in the apprehension of its objects, superseded in Christianity. Who will say it, when the indisputable office and function of the Son of God, who was a man, are to reveal the Father, not only by His teachings, but in and through Himself? "No man knoweth the Son, but the Father; and no man knoweth the Father but the Son, and he to whom the Son will reveal Him." (Mat. xi., 27.) Again, this unquestionable office is just as inconsistent with the intuition of God as the things

already adduced. Indeed no necessary apprehension can appropriately pertain to an act of knowledge rightly represented by the term intuition. Realization of this has led, apparently, to a change in the use of the word, from its etymological sense of immediate looking upon an object revealed to such act, to the sense of necessary apprehension, in which the manner or mode of apprehension receives no indication, and stands in need of metaphysical rendering. Theists are unmistakably weakening in their claim of an apprehension of God immediately and necessarily given to human reason, and granting, when they do not resort to puerile distinctions between different degrees of knowledge, an inferential process from, and by, the subject of human reason as known in consciousness.

But our topic is not quite finished with the denial just made, nor will be until we have glanced at the relation of mutual dependence between Philosophy in its necessary apprehension of its ultimate term as the speculative Absolute, and Christian faith in the embrace of its ultimate term as the God of Revelation, and especially of the glorious Gospel. There is a relation of mutual dependence here, which, without taking up the role of the early apologists, it is worth while to mark—worth while both for philosophy and for theology.

In the Absolute, philosophy, without a re-interpretation, the materials of which must come from abroad, comes up squarely against a dead wall. The origin of conditioned existence cannot be found in the final term of philosophy, and to this outcome of speculation may, perhaps, be attributed the singular fact that creation, in the Scripture sense of the word is wholly alien to the apprehensions of natural and unassisted reason. The statement is capable, I think, of historical verification. Creation is as much a revelation to human reason as anything else the Bible contains; and this makes that portion of the sacred record devoted to the history of it supremely important. "By faith we understand that the worlds were made,"—the faith "once," and for all time, "delivered to the saints." Creation is the revealed derivation of conditioned from absolute existence, which reason and philosophy by themselves were unable to reach, or even to suppose.

But Theology in her rendering of this revealed fact has undoubtedly reduced the Absolute to the character and category of the conditioned. This is manifest from the attribution to God of a nature,—whose place in thought is that of a determining element; of qualities, which must have a field for exercise; of the motive, “His own glory,” which crowns the exhibition and stamps it with the character of the conditioned. Without re-interpretation there can be no harmony between philosophy and theology. Can we not find in the Revelation of the New Testament a Christian Absolute which shall be, as tried by every legitimate test, the Absolute both of reason and of faith, and of the one in perfect harmony with the other?

Going back to the Council of Nice, where was made the authoritative formulation of the Christian faith, as respects the being of God, we find that not only was the help needed by Philosophy clearly given in the doctrine of the Trinity of persons in the Godhead—I lay no special stress here upon trinity as distinguished from plurality,—but also the gift was at the same time encumbered with two contradictions, which made it useless for the satisfaction of the need which has been referred to. Two indisputable contradictions, if we train under the standard of realistic philosophy, were attached by the Council of Nice to this prime doctrine of Revelation, in and under which contradictions Christian faith, as represented in Theology, has been subject to a needless reproach, and her adaptation to supply the most pressing emergency of natural reason, as encountered in Philosophy, hid from view. I shall not name these contradictions. It will not be difficult to recall them, nor to see how impracticable it is to cover up their characters which are respectively contradictory to what Philosophy, and Religion as well, are interested to have stand without contradiction,—even the eternal, unresolvable plurality of Persons in the Godhead. The Absolute of Revelation is still the Absolute, but strangely to human reason, turns out to be not one but three; this, if left uncontradicted by officious Theology, will not only help out Philosophy, but will bring relief to more than one “hard” doctrine of Scripture. I can’t enter here the province of Scripture exegesis, while perfectly willing, nay, anxious,

to bring the matter there. Mansel never would have claimed that the Absolute is inconsistent with relations *ab intra*, if he had had a correct metaphysic. As it is, with all due respect to him, his statement meets with unqualified denial. The Absolute as the final term of speculative reason is the postulated ground of a conditioned universe. Respecting itself no affirmation of unity can possibly be made. Its requirement, to be consistently the source of the conditioned Universe, is that of perfect, absolute freedom,—no thinkable necessity as lying, and to be supplied, in the universe to be created. That requirement is met in the revelation of the three, united in the bonds of ineffable love alone. Such an Absolute might have rested in itself, might never have gone forth to create, without being shorn of the grand perfection of deity. And when such an Absolute does go forth it is in entire freedom, both as respects creation and redemption. Certainly ethical relation is the only one that is absolutely free, and when we have found a ground for ethical relation within the Absolute, and have put the creation of the universe as well as its redemption under this regime, we have removed the deadlock of speculative reason, as far as its final term is concerned.

Let me close with a reference to the Rabbinic legend respecting the building of Solomon's temple. As the building went on, one stone, conspicuous for its marked features, found no place in the work of the builders. But just as the whole was to be crowned and completed, presto ! this stone was found to be what was necessary. So this doctrine of the Christian Absolute has lain upon the very surface of the Gospel, with its supreme importance to human reason, if not to soul-saving faith, very poorly divined. Men were too anxious, it would seem, to build the temple of dogmatic and authoritative Theology, without caring to ask, whether reason also should be helped, or only hindered and denied. But this stone of Gospel revelation, if not of dogmatic Theology, will crown the eternal structure of thought and truth, whether we call the structure reason or call it faith, with the same completeness in the one character as in the other. And this is the reconciliation between reason and religion which it would seem to become CHRISTIAN THOUGHT to hold up to view.

THE SOCRATIC PHILOSOPHY AND CHRISTIANITY.—J. W. Lowber, Ph.D., of Paducah, Ky., contributes the following paper to CHRISTIAN THOUGHT :

The philosophy of Athens is the most perfect of all her monuments. The most perfect gems of her art are in ruins. Only a few fragments remain of the work of the immortal Phidias. A few fragments are all that can now be found of the magnificent statuary that once crowned the Acropolis. But the philosophy of Athens has been the wonder of all succeeding ages. It may be safely doubted if modern philosophy has made any advancement beyond that reached by the ancient Greeks. It is quite certain that in solving the great problem of human life, the position of the Socratic school is more reasonable than that of many modern philosophers. The Socratic school insisted that life came from God ; but the modern Darwinian school try to derive it from insensate matter.

Previous to the advent of the great Socrates there were two opposite tendencies in Greek philosophy. In fact, these tendencies have existed among all nations that have had any philosophy at all. The Ionian school was *sensational* in its tendency, and the Italian school was *idealistic*. The first philosopher of the *realistic* school was the celebrated Thales of Miletus, who was born six hundred years before Christ. The great problem with him was the origin of things. What fundamental element is there in nature from which all things have come ? With Thales that fundamental element was water. Anaximander, his disciple, called it chaotic matter. His successor, Anaximenes, concluded that the infinite substance was air ; and Heraclitus of Ephesus declared it to be fire. While the first school of Greek philosophy was *materialistic* in its tendencies, it did not go so far as do modern materialists. It certainly recognized something beyond matter. If Thales had been a mere materialist he could not have used the following language: "Of all things the oldest is God ; the most beautiful is the world ; the swiftest is thought ; the wisest is time." Many modern philosophers might learn something from even the infant school of Greek thought.

Pythagoras was the earliest and most conspicuous philoso-

pher of the Italian school. He was born at Samos, 584 B.C., and was contemporary with Thales, of the realistic school. He taught the unity of God, but that He was not outside of the world, but in it, superintending the beginnings of all things and their various combinations. As the first school had dwelt upon the simple phenomena of nature as perceived by the senses, this school goes a little further, and dwells upon the relations of phenomena cognized by thought alone. When material phenomena is the exclusive object of thought, philosophy tends to sensationalism; so likewise when their relations are the exclusive object of thought, philosophy tends to idealistic abstraction. The two tendencies are clearly visible in the pre-Socratic schools, and produced the scepticism which was almost universal in Greece when Socrates made his appearance. The same one-sided positions are taken by many leading philosophers of the present age; and when you hear one of these specialists lecture, you are impressed with the idea that he thinks all truth is comprehended within the narrow limits of his horizon. Prof. Huxley, in his writings on education, instead of taking the whole circle of the sciences, cuts the circle, thus making his system a semicircle. He almost entirely ignores the highest elements of a true education.

At the completion of the first epoch of philosophy, when the thinkers of Greece, in despair, went into scepticism, Socrates appeared upon the stage. He was born near Athens, 469 B.C., and was the son of Sophroniscus, a sculptor. He followed for a time the occupation of his father, and tradition claims that he produced some interesting works. His personal appearance was decidedly against him. It is said that he had a flat nose, thick lips, prominent eyes, and a bald head. He had, however, a powerful constitution, and trained himself to great endurance. While a soldier he won the admiration of all; for there was none more brave and self-sacrificing than was he. He loved his country, and when it became necessary he was ready to fight for it.

There was no other man in Athens who understood politics so well as did Socrates, yet he did not seek political preferment. He was totally unselfish, and simply desired to teach the

Athenians those principles absolutely essential to the welfare of the state. He knew that no country could prosper where men were ignorant and selfish ; so he became a teacher in order to develop the highest elements in the men of Athens. There are certain high elements in human nature, which, if brought out, will make society prosper ; but if, on the other hand, the lower elements control, they will lead any state into anarchy and ruin. Socrates was anxious that the Athenian republic should be built upon knowledge ; and if his advice had been taken, it might have assumed a permanency, and not have been subjected to those evil tendencies which soon proved its ruin.

This great teacher was nearly always able to see the golden mean between extremes, and it was not difficult for him to see the anarchical tendency of an extreme democracy, such as was the Athenian. While he labored to counteract this dangerous tendency, he certainly was also opposed to absolutism. His ideal was not far from what we have realized in the American republic. While the American constitution is an inheritance of the past, it certainly embodies the grandest principles taught by the most eminent philosophers of the world. The system of morals which Socrates thought essential for a state, would afford a valuable study for even the eminent statesmen of our own country.

It appears strange that the Athenians should condemn to death the man who had been their greatest friend. Such, however, has been the history of the world. The nations have not usually appreciated their greatest benefactors. There is no business more thankless than that of the critic. Men do not like to be told their faults, especially when they do not intend to forsake them. Persons engaged in the liquor business usually dislike temperance men. Socrates was pre-eminently a critic. There was not an evil in Athens about which he did not have something to say. As the Jews became tired of the teaching of Jesus of Nazareth, so the Athenians became tired of their preacher of righteousness. They were determined to silence him in some way, and they thought the most certain way would be to put him to death.

Socrates produced a new era in philosophy. He saw the

evil tendencies in the preceding schools, and was anxious to make his system more practical. He thought that man and society were the proper objects of study. Like Dr. Johnson, he was not an admirer of external nature, and thought that all wheat-fields looked alike. He preferred to give his time to the study of man. He created ethical science, and his teachings in that department have seemed marvellous to even the greatest thinkers of modern times.

Socrates had invincible faith in truth ; he made her the mistress of his soul, and patiently toiled after perfect communion with her. He felt, as did Jesus, that truth alone would give freedom. On one occasion, when he came in conflict with the public authorities, his language was almost identical with that used by Peter and John when forbidden to preach by the Sanhedrim : "Whether it be right in the sight of the gods to hearken unto you rather than to the gods, judge ye ; but as for me, I have sworn to obey the laws, and I cannot forswear myself." This great Greek philosopher felt that he had a divine mission, and that nothing should get in the way of it. The faithful monitor, which he called his *Dæmon*, was evidently the voice of conscience. He felt that it was a divine voice, and always heeded its warnings. It would be well for the world if all men would listen to the words of caution which that monitor that God has placed in the bosom of each is constantly sending forth. This great Greek moralist was eminently a religious man. He taught that we can only know God in His works, thus recognizing the doctrine of divine providence. His religion was strictly humanitarian, as he declared the well-being of man to be the end of the universe. He loved to study final causes, and gave to them more attention than to efficient causes. While he did not deny inferior deities, he looked upon them very much as we look upon angels—as infinitely below the Supreme Being. I believe that Socrates was a monotheist, but he did not entirely ignore the polytheism of his day.

Socrates may not have held to the doctrine of ideas, as taught by Plato ; but he certainly believed that there were certain principles latent in the human mind, which constitute the ground of certain knowledge or absolute truth. These were

embryonate in the womb of reason, and by reflection could be brought to a birth. That is the reason why he adopted the method of teaching which he so successfully used. His object was not so much to impart knowledge, as to develop those elements already in the mind. He sought to deliver the mind of secret truth, which already lay in its constitution, and thus psychology became the basis of all knowledge.

The German philosopher, Schleiermacher, claims that Socrates did not benefit the world so much by what he taught as by his method of teaching. He applied the same method to the study of mind and human nature that Bacon afterwards applied to the physical sciences. It was the *inductive* method applied to the facts of consciousness. What is induction? It is the process of discovering causes from effects, being from phenomena, and laws from facts. He did this by observing and classifying the facts of consciousness. He applied *analysis* to the phenomena of mind. Aristotle claimed that Socrates was the author of *inductive reasoning* and *abstract definition*. It is, then, a mistake to suppose that *induction* is a method invented by modern science. It has been used to some extent by all men who have reasoned at all; and it was employed by Socrates in as thoroughly scientific a way as it is now employed by any scientist.

Those who study the life and teaching of Socrates, will be struck with the likeness in many respects to the life of Jesus of Nazareth, and the almost perfect harmony between the Socratic philosophy and Christianity. It is not surprising that the contemporaries of the great Greek philosopher claimed that he brought philosophy down from Heaven. Socrates was a public teacher as was Jesus, and he spent his time simply for the good of others. He was true to his principles to the last, and died the death of a martyr. While I believe that he was providentially a forerunner of Jesus, we cannot account for the life of Christ on the same principles upon which we can account for the life of Socrates. Socrates was certainly a very superior man, but Jesus of Nazareth was more than a man. While Socrates died the death of a martyr, Jesus died the death of a God.

In comparing Jesus to Socrates, He towers above even the great Greek as a mountain towers above the sea. The work of

Socrates was local, while that of Jesus was universal. The influence of the teachings of Jesus upon the world compared with the Socratic philosophy shows the infinite superiority of Christianity. When we consider the circumstances surrounding the two teachers, we are overwhelmed with the superhuman character of Jesus. Socrates did not commence teaching philosophy until middle life. He had spent his time in preparation. Jesus, without any preparation, commenced at thirty years of age. Socrates taught nearly forty years, and Jesus taught only three years and a half. Socrates lived in the most intellectual city in the world, and visited the great centres of culture. Jesus lived in a despised town, and among an illiterate people; yet His teachings were so perfect that they needed no revision. He made no mistakes, and even His enemies could not find a flaw in either His life or teachings. His ideals for the spiritual elevation of man were certainly beyond the power of the greatest genius to invent. It was a long time before even His own disciples could understand the spiritual and universal character of His kingdom.

The Christian fathers have almost universally taught that the Socratic philosophy was a preparation for Christianity. Socrates taught that religious duties are three; reverence, gratitude, and obedience. Wherever these things were taught, the people could not be otherwise than better prepared for Christianity. The tendency of the Socratic philosophy was to free the mind from polytheistic notions, and bring before it prominently the theistic idea. While Socrates did not definitely reject polytheism, the tendency of his philosophy was to undermine it. He recognized beyond its gods one Supreme Being, and when the people learned to worship Him, they would gradually give up the worship of inferior divinities. While others among the Greeks, even before Socrates, believed in one Supreme Being, the tendency of the Socratic philosophy was to spiritualize the theistic conception. He not only taught that there is one God, but the God is spirit. Obedience to God, who is spirit, he also taught, and this purified the moral sense, and prepared the Greeks for something better.

The Socratic philosophy very definitely taught a future life,

which was an important preparation for Christianity. Just before his death, the great philosopher conversed with his friends on the subject of a future state. Crito asked him how he wanted to be buried. The philosopher told him any way he liked, if he could only get hold of him. He then turned to the friends and said: "I cannot persuade this good Crito that I who am talking to him, and marshalling the heads of my arguments, am the veritable Socrates; but he persists in thinking that Socrates is this body which he will see by and by stretched out on the floor, and he asks how he is to bury me." Socrates insisted that after his death, he would leave them, and go to the land of the blest. The fact cannot be questioned that man has an instinctive anticipation of a future state; and Socrates studied the inward man so thoroughly as to be well satisfied on that point. The resignation of Socrates at the hour of death is an interesting subject for reflection for even those who live in the light of a high Christian civilization. In its teaching on the future state, the Socratic philosophy was an important preparation for Christianity. Christ brought life and immortality to light by the redemption of the *body* as well as the spirit.

MONTHLY MEETINGS.

BY THE SECRETARY.

THE Institute held its regular monthly meeting in its rooms, No. 4 Winthrop Place, April 7th, 1887, at 8 P.M., the President being in the chair. The devotional exercises were led by Rev. H. A. Dows. The minutes of the last meeting were read and approved. The following list of new members was read: Richard W. Jones, M.A., LL.D., President of Industrial College, Columbus, Miss.; Hon. Jacob Sleeper, of Boston; Mr. John F. Alexander, of New York; Rev. John E. Williams, of Hornellsville, N. Y.; Rev. John H. Edwards, of New York; Rev. Wilbur F. Crafts, A.M. (author), of New York; Rev. John B. Robins, A.M., of Dalton, Ga.; Rt. Rev. Hugh M. Thompson, S.T.D., LL.D., Bishop of Mississippi; Inman W. Cooper, A.M., of Edward, Mississippi; Rev. D. J. Waller, Ph.D., President Normal School of Blooms-

burg, Pa.; Rev. G. E. Ackerman, A.M., M.D., S.T.D., of Buffalo, N. Y.; Rev. Geo. H. Dryer, A.M., Medina, N. Y.

The regular paper of the evening was by Rev. James M. Whiton, Ph.D., whose subject was "The Ethical Proof of Our Belief in Immortality." The subject was discussed by Mr. Boucher, Mr. Wilder, Rev. Mr. Dows and Dr. Deems.

At the Monthly Meeting held May 5th, the devotional exercises were led by Rev. James M. Whiton, Ph.D., of New York.

The minutes of the last meeting were read and approved. The following names of new members were read by the Secretary: Rev. Daniel E. Baldwin, Ph.D., D.D., of Waynesburg, Pa.; Rev. Dr. Joseph S. Van Dyke, of Cranbury, N. J.; Mr. Charles C. Hine, of Newark, N. J.; Rev. Thomas E. Fleming, A.M., Ph.D., of Davenport, Iowa; Rev. George W. Peck, A.M., LL.D., of Dansville, N. Y.; John G. Van Slyke, A.M., D.D., of Kingston, N. Y.; Amos B. Smith, M.D., of the Hygienic Institute of Geneva, N. Y.; and Rev. Charles P. Mills, of Newburyport, Mass.

C. B. Warring, Ph.D., author of "Miracles of To-Day," read a paper on "A Literal Genesis I. in the Light of Present Knowledge." The paper was discussed by Rev. J. M. Whiton, Mr. Wilder, and Phœbus W. Lyon, Esq.

The next Monthly Meeting of the Institute will be in October.

ABOUT BOOKS.

[In this department we shall make mention of recent publications, especially those in the line of our studies. There will not be space for extended review. The name of the book, its publisher, and its price when known, together with a brief statement of its drift will probably meet the demands of our readers. Any book mentioned will be sent post-paid, on receipt of price, by WILBUR B. KETCHAM, 71 Bible House, New York.]

WE find our space so contracted at the conclusion of our volume that we can make little more than mere mention of the books on our table. (1.) The most important to our readers is the "History of Modern Philosophy," by Kuno Fischer. This volume treats of Descartes and his school, and is translated from the third and revised German edition by Prof. Gordy, of

Ohio University, is edited by ex-president Porter, and published by Charles Scribner's Sons. It is a clearly printed octavo of 589 pp.: price \$3.50. It is impossible to endorse any book of its size thoroughly, and we might point out what seems to us just criticisms of some of the interpretations which he gives of some schools of philosophy, but that would be true in the case of any book. This volume shows great ability and treats its subject in a style so bright and clear that those who are beginning to study philosophy will scarcely have any difficulty in understanding the author. On that account we give it very hearty recommendation to those of our readers who are not professional students or readers of philosophy, but who desire a good book in this department. The endorsement Dr. Porter gives to the translator will increase the confidence of readers. (2.) Messrs. Ginn & Co. (Boston) publish (12mo., 235 pp.) an interesting work on "The Philosophy of Wealth," by Prof. John B. Clark, of Smith College. It is an attempt to reformulate economic principles, the author holding that the traditional system is obviously defective in its premises. Of course there will be differences of opinion in regard to the views of the author, but the book is well worth study. (3.) A remarkably bright and tonic book is "Masters of the Situation, or Some Secrets of Success," by Rev. William J. Tilley. It is published by S. C. Griggs & Co. (Chicago): price \$1.25. It is an excellent book to put in the hands of young people. (4.) Messrs. Funk & Wagnalls, in a little book of 91 pages, give us "The New Psychic Studies in their Relation to Christian Thought," by Franklin Johnson, D.D. The name of the book sufficiently explains its intent. (5.) An able book which should be in all libraries is the Rev. Wilbur F. Crafts' "The Sabbath For Man," published by Funk & Wagnalls. It is a study of the origination, obligation, history, advantages, and present state of Sabbath observance, with special reference to the rights of working men, based on Scripture, literature, and especially on a symposium of correspondence with persons of all nations and denominations. It is an encyclopedia in itself on this subject. One who has this volume will scarcely need to go elsewhere in examining any branch of this great subject. It is dedicated to workingmen, in defence of whose Sabbath it was compiled. We

regard the book as more than ordinarily valuable. (6.) The same house, in the "Bible Students' Library," publish a translation of Düsterdieck's "Critical and Exegetical Handbook to the Revelation of St John." The translation is made by Prof. Jacobs of the Lutheran Theological Seminary, Philadelphia. It is a most important contribution to our biblical literature. The Tübingen school undertook to overthrow the Johannean origin of the Gospel by conceding the Book of Revelation to St. John, and then endeavoring to show that the style of the Gospel was so different from the Book of Revelation that they could not have been written by the same author. The writer of this book takes exactly the opposite ground and denies the apostolic origin of the Book of Revelation. His arguments do not seem conclusive. We find also a fly or two in the ointment. He does not believe the Book of Revelation to be of apostolic origin, but he does believe it to be inspired. He admits that the account is canonical but says that it must be considered deutero-canonical. To the discriminating Bible student, while these things are objectionable, they do not destroy the value of this very able and learned book. (7.) The same publishers have issued the fifth volume of Dr. Joseph Parker's great work "The People's Bible," which brings it down to the close of the fifth chapter of Judges. We have already warmly expressed our favorable opinion of this very great work. (8.) "Creed and Character" is the title of a volume of sermons by the Rev. H. S. Holland, Canon of St. Paul's, republished by Charles Scribner's Sons: \$1.50. (9.) The same publishers are issuing a series of concise and carefully prepared volumes of special eras of history. Each is devoted to a group of events of such importance as to entitle it to be regarded as an epoch. The series has had great success, and has been adopted as a text-book in many of our colleges and universities. The latest is "The Early Tudors, Henry VII. and Henry VIII.," by the Rev. C. E. Moberly, late a Master in Rugby School, with maps and plans: price \$1.00. (10.) Messrs. Ginn & Co. have brought out "A Handbook to Dante," by Giovanni A. Scartazzini, translated from the Italian, with notes and additions by Thomas Davidson. It is intended to furnish students of Dante's works with the necessary preparatory information, historical, biographical, and literary. The work is admirably well done and should be read by all who are intending to enter upon any study of the works of the dark Italian hierophant.

